BAB V

KESIMPULAN DAN SARAN

5.1 Kesimpulan

Penggunaan teknik kontrol getaran pasif khususnya untuk meredam getaran Indonesia jarang ditemukan. Padahal kalau dilihat lebih jauh Indonesia merupakan salah satu negara gempa yang sangat berbahaya karena dilalui oleh dua lempeng yang sangat aktif.

Pada tugas akhir ini perhitungan analisis struktur menggunakan perhitungan manual dengan menggunakan program MATLAB yang kemudian hasilnya dibandingkan dengan hasil perhitungan analisis struktur dengan menggunakan SAP 2000 versi 11. Gedung yang ditinjau adalah gedung dengan 12 lantai. Dalam perhitungan secara manual dengan menggunakan program MATLAB diperoleh hasil yang hampir sama dengan hasil yang diperoleh dari program SAP 2000 versi 11.

Peredam getaran *Tuned Mass Dampers* dipasang pada lantai 12. Kemudian nilai redaman dan kekakuan dioptimasi sehingga didapat nilai yang optimum. Setelah nilai redaman dan kekakuan didapat kemudian disimulasikan terhadap berbagai gempa yang tersedia yaitu gempa El Centro 1940 NS, gempa Kobe NS 1995, gempa Hachinohe 1968, dan gempa Northridge 1994. Hasil analisis menunjukkan bahwa peredam getaran yang direncanakan cukup efektif. Jika meninjau gempa Kobe perpindahan pada lantai 12 gedung dapat berkurang 17 % apabila dibandingkan tanpa *TMD*.

5.2 Saran

Dalam penulisan tugas akhir ini ada beberapa saran dari penulis untuk pembaca khususnya untuk kalangan teknik sipil yaitu :

1. Dibutuhkan ketelitian yang ekstra dalam mengerjakan perhitungan analisis struktur dengan menggunakan program MATLAB.

2. Teknik-teknik perhitungan peredam getaran lainnya harus dikembangkan karena mengingat pentingnya peredam getaran untuk bangunan-bangunan bertingkat tinggi khususnya di Indonesia.

3. Perlu dicoba dengan menggunakan massa *TMD* yang berkisar 3-10 % dari massa seluruh gedung.

4. Perlu dicoba letak *TMD* pada lantai yang lainnya sehingga didapat nilai pengurangan perpindahan yang lebih optimum.

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Lampiran 1. Analisis struktur menggunakan MATLAB

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n292=coor3(0,43.6,18);
n293=coor3(6,43.6,18);
n294=coor3(12,43.6,18);

n295=coor3(0,43.6,24);
n296=coor3(6,43.6,24);
n297=coor3(12,43.6,24);

%Column
[L1,T1]=mem3f(n1,n26,n2);
[L2,T2]=mem3f(n26,n51,n2);
[L3,T3]=mem3f(n51,n76,n2);
[L4,T4]=mem3f(n76,n101,n2);
[L5,T5]=mem3f(n101,n126,n2);
[L6,T6]=mem3f(n126,n151,n2);
[L7,T7]=mem3f(n151,n172,n2);
[L8,T8]=mem3f(n172,n193,n2);
[L9,T9]=mem3f(n193,n214,n2);
[L10,T10]=mem3f(n214,n235,n2);
[L11,T11]=mem3f(n235,n256,n2);
[L12,T12]=mem3f(n256,n277,n2);

[L13,T13]=mem3f(n2,n27,n3);
[L14,T14]=mem3f(n27,n52,n3);
[L15,T15]=mem3f(n52,n77,n3);
[L16,T16]=mem3f(n77,n102,n3);
[L17,T17]=mem3f(n102,n127,n3);
[L18,T18]=mem3f(n127,n152,n3);
[L19,T19]=mem3f(n152,n173,n3);
[L20,T20]=mem3f(n173,n194,n3);
[L21,T21]=mem3f(n194,n215,n3);
[L22,T22]=mem3f(n215,n236,n3);
[L23,T23]=mem3f(n236,n257,n3);
[L24,T24]=mem3f(n257,n278,n3);

[L25,T25]=mem3f(n3,n28,n4);
[L26,T26]=mem3f(n28,n53,n4);
[L27,T27]=mem3f(n53,n78,n4);
[L28,T28]=mem3f(n78,n103,n4);
[L29,T29]=mem3f(n103,n128,n4);
[L30,T30]=mem3f(n128,n153,n4);
[L31,T31]=mem3f(n153,n174,n4);
[L32,T32]=mem3f(n174,n195,n4);
[L33,T33]=mem3f(n195,n216,n4);
[L34,T34]=mem3f(n216,n237,n4);
[L35,T35]=mem3f(n237,n258,n4);
[L36,T36]=mem3f(n258,n279,n4);

[L37,T37]=mem3f(n4,n29,n5);
[L38,T38]=mem3f(n29,n54,n5);
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[L39,T39]=mem3f(n54,n79,n5);
[L40,T40]=mem3f(n79,n104,n5);
[L41,T41]=mem3f(n104,n129,n5);
[L42,T42]=mem3f(n129,n154,n5);
[L43,T43]=mem3f(n154,n175,n5);
[L44,T44]=mem3f(n175,n196,n5);
[L45,T45]=mem3f(n196,n217,n5);
[L46,T46]=mem3f(n217,n238,n5);
[L47,T47]=mem3f(n238,n259,n5);
[L48,T48]=mem3f(n259,n280,n5);

[L49,T49]=mem3f(n5,n30,n4);
[L50,T50]=mem3f(n30,n55,n4);
[L51,T51]=mem3f(n55,n80,n4);
[L52,T52]=mem3f(n80,n105,n4);
[L53,T53]=mem3f(n105,n130,n4);
[L54,T54]=mem3f(n130,n155,n4);
[L55,T55]=mem3f(n155,n176,n4);
[L56,T56]=mem3f(n176,n197,n4);
[L57,T57]=mem3f(n197,n218,n4);
[L58,T58]=mem3f(n218,n239,n4);
[L59,T59]=mem3f(n239,n260,n4);
[L60,T60]=mem3f(n260,n281,n4);

[L61,T61]=mem3f(n6,n31,n7);
[L62,T62]=mem3f(n31,n56,n7);
[L63,T63]=mem3f(n56,n81,n7);
[L64,T64]=mem3f(n81,n106,n7);
[L65,T65]=mem3f(n106,n131,n7);
[L66,T66]=mem3f(n131,n156,n7);
[L67,T67]=mem3f(n156,n177,n7);
[L68,T68]=mem3f(n177,n198,n7);
[L69,T69]=mem3f(n198,n219,n7);
[L70,T70]=mem3f(n219,n240,n7);
[L71,T71]=mem3f(n240,n251,n7);
[L72,T72]=mem3f(n251,n282,n7);

[L73,T73]=mem3f(n7,n32,n8);
[L74,T74]=mem3f(n32,n57,n8);
[L75,T75]=mem3f(n57,n82,n8);
[L76,T76]=mem3f(n82,n107,n8);
[L77,T77]=mem3f(n107,n132,n8);
[L78,T78]=mem3f(n132,n157,n8);
[L79,T79]=mem3f(n157,n178,n8);
[L80,T80]=mem3f(n178,n199,n8);
[L81,T81]=mem3f(n199,n220,n8);
[L82,T82]=mem3f(n220,n241,n8);
[L83,T83]=mem3f(n241,n262,n8);
[L84,T84]=mem3f(n262,n283,n8);

[L85,T85]=mem3f(n8,n33,n9);
[L86,T86]=mem3f(n33,n58,n9);
[L87,T87]=mem3f(n58,n83,n9);
[L88,T88]=mem3f(n83,n108,n9);
[L89,T89]=mem3f(n108,n133,n9);
[L90,T90]=mem3f(n133,n158,n9);
[L91,T91]=mem3f(n158,n179,n9);
[L92,T92]=mem3f(n179,n200,n9);
[L93,T93]=mem3f(n200,n221,n9);
[L94,T94]=mem3f(n221,n242,n9);
[L95,T95]=mem3f(n242,n263,n9);
[L96,T96]=mem3f(n263,n284,n9);

[L97,T97]=mem3f(n9,n34,n10);
[L98,T98]=mem3f(n34,n59,n10);
[L99,T99]=mem3f(n59,n84,n10);
[L100,T100]=mem3f(n84,n109,n10);
[L101,T101]=mem3f(n109,n134,n10);
[L102,T102]=mem3f(n134,n159,n10);
[L103,T103]=mem3f(n159,n180,n10);
[L104,T104]=mem3f(n180,n201,n10);

[L105,T105]=mem3f(n201,n222,n10);
[L106,T106]=mem3f(n222,n243,n10);
[L107,T107]=mem3f(n243,n264,n10);
[L108,T108]=mem3f(n264,n285,n10);

[L109,T109]=mem3f(n10,n35,n9);
[L110,T110]=mem3f(n35,n60,n9);
[L111,T111]=mem3f(n60,n85,n9);
[L112,T112]=mem3f(n85,n110,n9);
[L113,T113]=mem3f(n110,n135,n9);
[L114,T114]=mem3f(n135,n160,n9);
[L115,T115]=mem3f(n160,n181,n9);
[L116,T116]=mem3f(n181,n202,n9);
[L117,T117]=mem3f(n202,n223,n9);
[L118,T118]=mem3f(n223,n244,n9);
[L119,T119]=mem3f(n244,n265,n9);
[L120,T120]=mem3f(n265,n286,n9);

[L121,T121]=mem3f(n11,n36,n12);
[L122,T122]=mem3f(n36,n61,n12);
[L123,T123]=mem3f(n61,n86,n12);
[L124,T124]=mem3f(n86,n111,n12);
[L125,T125]=mem3f(n111,n136,n12);
[L126,T126]=mem3f(n136,n161,n12);
[L127,T127]=mem3f(n161,n182,n12);
[L128,T128]=mem3f(n182,n203,n12);
[L129,T129]=mem3f(n203,n224,n12);
[L130,T130]=mem3f(n224,n245,n12);
[L131,T131]=mem3f(n245,n266,n12);
[L132,T132]=mem3f(n266,n287,n12);

[L133,T133]=mem3f(n12,n37,n13);
[L134,T134]=mem3f(n37,n62,n13);
[L135,T135]=mem3f(n62,n87,n13);
[L136,T136]=mem3f(n87,n112,n13);
[L137,T137]=mem3f(n112,n137,n13);
[L138,T138]=mem3f(n137,n162,n13);
[L139,T139]=mem3f(n162,n183,n13);
[L140,T140]=mem3f(n183,n204,n13);
[L141,T141]=mem3f(n204,n225,n13);
[L142,T142]=mem3f(n225,n246,n13);
[L143,T143]=mem3f(n246,n267,n13);
[L144,T144]=mem3f(n267,n288,n13);

[L145,T145]=mem3f(n13,n38,n14);
[L146,T146]=mem3f(n38,n63,n14);
[L147,T147]=mem3f(n63,n88,n14);
[L148,T148]=mem3f(n88,n113,n14);
[L149,T149]=mem3f(n113,n138,n14);
[L150,T150]=mem3f(n138,n163,n14);
[L151,T151]=mem3f(n163,n184,n14);
[L152,T152]=mem3f(n184,n205,n14);
[L153,T153]=mem3f(n205,n226,n14);
[L154,T154]=mem3f(n226,n247,n14);
[L155,T155]=mem3f(n247,n268,n14);
[L156,T156]=mem3f(n268,n289,n14);

[L157,T157]=mem3f(n14,n39,n15);
[L158,T158]=mem3f(n39,n64,n15);
[L159,T159]=mem3f(n64,n89,n15);
[L160,T160]=mem3f(n89,n114,n15);
[L161,T161]=mem3f(n114,n139,n15);
[L162,T162]=mem3f(n139,n164,n15);
[L163,T163]=mem3f(n164,n185,n15);
[L164,T164]=mem3f(n185,n206,n15);
[L165,T165]=mem3f(n206,n227,n15);
[L166,T166]=mem3f(n227,n248,n15);
[L167,T167]=mem3f(n248,n269,n15);
[L168,T168]=mem3f(n269,n290,n15);

[L169,T169]=mem3f(n15,n40,n14);
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[L170,T170]=mem3f(n40,n65,n14);        [L235,T235]=mem3f(n211,n232,n22);
[L171,T171]=mem3f(n65,n90,n14);        [L236,T236]=mem3f(n232,n253,n22);
[L172,T172]=mem3f(n90,n115,n14);       [L237,T237]=mem3f(n253,n274,n22);
[L173,T173]=mem3f(n115,n140,n14);      [L238,T238]=mem3f(n274,n295,n22);
[L174,T174]=mem3f(n140,n165,n14);
[L175,T175]=mem3f(n165,n186,n14);      [L239,T239]=mem3f(n22,n47,n23);
[L176,T176]=mem3f(n186,n207,n14);      [L240,T240]=mem3f(n47,n72,n23);
[L177,T177]=mem3f(n207,n228,n14);      [L241,T241]=mem3f(n72,n97,n23);
[L178,T178]=mem3f(n228,n249,n14);      [L242,T242]=mem3f(n97,n122,n23);
[L179,T179]=mem3f(n249,n270,n14);      [L243,T243]=mem3f(n122,n147,n23);
[L180,T180]=mem3f(n270,n291,n14);      [L244,T244]=mem3f(n147,n170,n23);
                                       [L245,T245]=mem3f(n170,n191,n23);
[L181,T181]=mem3f(n16,n41,n17);        [L246,T246]=mem3f(n191,n212,n23);
[L182,T182]=mem3f(n41,n66,n17);        [L247,T247]=mem3f(n212,n233,n23);
[L183,T183]=mem3f(n66,n91,n17);        [L248,T248]=mem3f(n233,n254,n23);
[L184,T184]=mem3f(n91,n116,n17);       [L249,T249]=mem3f(n254,n275,n23);
[L185,T185]=mem3f(n116,n141,n17);      [L250,T250]=mem3f(n275,n296,n23);
[L186,T186]=mem3f(n141,n166,n17);
[L187,T187]=mem3f(n166,n187,n17);      [L251,T251]=mem3f(n23,n48,n24);
[L188,T188]=mem3f(n187,n208,n17);      [L252,T252]=mem3f(n48,n73,n24);
[L189,T189]=mem3f(n208,n229,n17);      [L253,T253]=mem3f(n73,n98,n24);
[L190,T190]=mem3f(n229,n250,n17);      [L254,T254]=mem3f(n98,n123,n24);
[L191,T191]=mem3f(n250,n271,n17);      [L255,T255]=mem3f(n123,n148,n24);
[L192,T192]=mem3f(n271,n292,n17);      [L256,T256]=mem3f(n148,n171,n24);
                                       [L257,T257]=mem3f(n171,n192,n24);
[L193,T193]=mem3f(n17,n42,n18);        [L258,T258]=mem3f(n192,n213,n24);
[L194,T194]=mem3f(n42,n67,n18);        [L259,T259]=mem3f(n213,n234,n24);
[L195,T195]=mem3f(n67,n92,n18);        [L260,T260]=mem3f(n234,n255,n24);
[L196,T196]=mem3f(n92,n117,n18);       [L261,T261]=mem3f(n255,n276,n24);
[L197,T197]=mem3f(n117,n142,n18);      [L262,T262]=mem3f(n276,n291,n24);
[L198,T198]=mem3f(n142,n167,n18);
[L199,T199]=mem3f(n167,n188,n18);      [L263,T263]=mem3f(n24,n49,n25);
[L200,T200]=mem3f(n188,n209,n18);      [L264,T264]=mem3f(n49,n74,n25);
[L201,T201]=mem3f(n209,n230,n18);      [L265,T265]=mem3f(n74,n99,n25);
[L202,T202]=mem3f(n230,n251,n18);      [L266,T266]=mem3f(n99,n124,n25);
[L203,T203]=mem3f(n251,n272,n18);      [L267,T267]=mem3f(n124,n149,n25);
[L204,T204]=mem3f(n272,n293,n18);
                                       [L268,T268]=mem3f(n25,n50,n24);
[L205,T205]=mem3f(n18,n43,n19);        [L269,T269]=mem3f(n50,n75,n24);
[L206,T206]=mem3f(n43,n68,n19);        [L270,T270]=mem3f(n75,n100,n24);
[L207,T207]=mem3f(n68,n93,n19);        [L271,T271]=mem3f(n100,n125,n24);
[L208,T208]=mem3f(n93,n118,n19);       [L272,T272]=mem3f(n125,n150,n24);
[L209,T209]=mem3f(n118,n143,n19);
[L210,T210]=mem3f(n143,n168,n19);      %Beam
[L211,T211]=mem3f(n168,n189,n19);      %Arah x
[L212,T212]=mem3f(n189,n210,n19);      [L273,T273]=mem3f(n26,n27,n51); %
[L213,T213]=mem3f(n210,n231,n19);      lantai 1
[L214,T214]=mem3f(n231,n252,n19);      [L274,T274]=mem3f(n27,n28,n51);
[L215,T215]=mem3f(n252,n273,n19);      [L275,T275]=mem3f(n28,n29,n51);
[L216,T216]=mem3f(n273,n294,n19);      [L276,T276]=mem3f(n29,n30,n51);
                                       [L277,T277]=mem3f(n31,n32,n56);
[L217,T217]=mem3f(n19,n44,n20);        [L278,T278]=mem3f(n32,n33,n56);
[L218,T218]=mem3f(n44,n69,n20);        [L279,T279]=mem3f(n33,n34,n56);
[L219,T219]=mem3f(n69,n94,n20);        [L280,T280]=mem3f(n34,n35,n56);
[L220,T220]=mem3f(n94,n119,n20);       [L281,T281]=mem3f(n36,n37,n61);
[L221,T221]=mem3f(n119,n144,n20);      [L282,T282]=mem3f(n37,n38,n61);
                                       [L283,T283]=mem3f(n38,n39,n61);
[L222,T222]=mem3f(n20,n45,n19);        [L284,T284]=mem3f(n39,n40,n61);
[L223,T223]=mem3f(n45,n70,n19);        [L285,T285]=mem3f(n41,n42,n66);
[L224,T224]=mem3f(n70,n95,n19);        [L286,T286]=mem3f(n42,n43,n66);
[L225,T225]=mem3f(n95,n120,n19);       [L287,T287]=mem3f(n43,n44,n66);
[L226,T226]=mem3f(n120,n145,n19);      [L288,T288]=mem3f(n44,n45,n66);
                                       [L289,T289]=mem3f(n46,n47,n71);
[L227,T227]=mem3f(n21,n46,n22);        [L290,T290]=mem3f(n47,n48,n71);
[L228,T228]=mem3f(n46,n71,n22);        [L291,T291]=mem3f(n48,n49,n71);
[L229,T229]=mem3f(n71,n96,n22);        [L292,T292]=mem3f(n49,n50,n71);
[L230,T230]=mem3f(n96,n121,n22);
[L231,T231]=mem3f(n121,n146,n22);      [L293,T293]=mem3f(n51,n52,n76);%
[L232,T232]=mem3f(n146,n169,n22);      lantai 2
[L233,T233]=mem3f(n169,n190,n22);      [L294,T294]=mem3f(n52,n53,n76);
[L234,T234]=mem3f(n190,n211,n22);      [L295,T295]=mem3f(n53,n54,n76);
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[L296,T296]=mem3f(n54,n55,n76);
[L297,T297]=mem3f(n56,n57,n81);
[L298,T298]=mem3f(n57,n58,n81);
[L299,T299]=mem3f(n58,n59,n81);
[L300,T300]=mem3f(n59,n60,n81);
[L301,T301]=mem3f(n61,n62,n86);
[L302,T302]=mem3f(n62,n63,n86);
[L303,T303]=mem3f(n63,n64,n86);
[L304,T304]=mem3f(n64,n65,n86);
[L305,T305]=mem3f(n66,n67,n91);
[L306,T306]=mem3f(n67,n68,n91);
[L307,T307]=mem3f(n68,n69,n91);
[L308,T308]=mem3f(n69,n70,n91);
[L309,T309]=mem3f(n71,n72,n96);
[L310,T310]=mem3f(n72,n73,n96);
[L311,T311]=mem3f(n73,n74,n96);
[L312,T312]=mem3f(n74,n75,n96);

[L313,T313]=mem3f(n76,n77,n101);%
lantai 3
[L314,T314]=mem3f(n77,n78,n101);
[L315,T315]=mem3f(n78,n79,n101);
[L316,T316]=mem3f(n79,n80,n101);
[L317,T317]=mem3f(n81,n82,n106);
[L318,T318]=mem3f(n82,n83,n106);
[L319,T319]=mem3f(n83,n84,n106);
[L320,T320]=mem3f(n84,n85,n106);
[L321,T321]=mem3f(n86,n87,n111);
[L322,T322]=mem3f(n87,n88,n111);
[L323,T323]=mem3f(n88,n89,n111);
[L324,T324]=mem3f(n89,n90,n111);
[L325,T325]=mem3f(n91,n92,n116);
[L326,T326]=mem3f(n92,n93,n116);
[L327,T327]=mem3f(n93,n94,n116);
[L328,T328]=mem3f(n94,n95,n116);
[L329,T329]=mem3f(n96,n97,n121);
[L330,T330]=mem3f(n97,n98,n121);
[L331,T331]=mem3f(n98,n99,n121);
[L332,T332]=mem3f(n99,n100,n121);

[L333,T333]=mem3f(n101,n102,n126);%
lantai 4
[L334,T334]=mem3f(n102,n103,n126);
[L335,T335]=mem3f(n103,n104,n126);
[L336,T336]=mem3f(n104,n105,n126);
[L337,T337]=mem3f(n106,n107,n131);
[L338,T338]=mem3f(n107,n108,n131);
[L339,T339]=mem3f(n108,n109,n131);
[L340,T340]=mem3f(n109,n110,n131);
[L341,T341]=mem3f(n111,n112,n136);
[L342,T342]=mem3f(n112,n113,n136);
[L343,T343]=mem3f(n113,n114,n136);
[L344,T344]=mem3f(n114,n115,n136);
[L345,T345]=mem3f(n116,n117,n141);
[L346,T346]=mem3f(n117,n118,n141);
[L347,T347]=mem3f(n118,n119,n141);
[L348,T348]=mem3f(n119,n120,n141);
[L349,T349]=mem3f(n121,n122,n146);
[L350,T350]=mem3f(n122,n123,n146);
[L351,T351]=mem3f(n123,n124,n146);
[L352,T352]=mem3f(n124,n125,n146);

[L353,T353]=mem3f(n126,n127,n151);%
lantai 5
[L354,T354]=mem3f(n127,n128,n151);
[L355,T355]=mem3f(n128,n129,n151);
[L356,T356]=mem3f(n129,n130,n151);
[L357,T357]=mem3f(n131,n132,n156);
[L358,T358]=mem3f(n132,n133,n156);
[L359,T359]=mem3f(n133,n134,n156);
[L360,T360]=mem3f(n134,n135,n156);

[L361,T361]=mem3f(n136,n137,n161);
[L362,T362]=mem3f(n137,n138,n161);
[L363,T363]=mem3f(n138,n139,n161);
[L364,T364]=mem3f(n139,n140,n161);
[L365,T365]=mem3f(n141,n142,n166);
[L366,T366]=mem3f(n142,n143,n166);
[L367,T367]=mem3f(n143,n144,n166);
[L368,T368]=mem3f(n144,n145,n166);
[L369,T369]=mem3f(n146,n147,n169);
[L370,T370]=mem3f(n147,n148,n169);
[L371,T371]=mem3f(n148,n149,n169);
[L372,T372]=mem3f(n149,n150,n169);

[L373,T373]=mem3f(n151,n152,n172);%
lantai 6
[L374,T374]=mem3f(n152,n153,n172);
[L375,T375]=mem3f(n153,n154,n172);
[L376,T376]=mem3f(n154,n155,n172);
[L377,T377]=mem3f(n156,n157,n177);
[L378,T378]=mem3f(n157,n158,n177);
[L379,T379]=mem3f(n158,n159,n177);
[L380,T380]=mem3f(n159,n160,n177);
[L381,T381]=mem3f(n161,n162,n182);
[L382,T382]=mem3f(n162,n163,n182);
[L383,T383]=mem3f(n163,n164,n182);
[L384,T384]=mem3f(n164,n165,n182);
[L385,T385]=mem3f(n166,n167,n187);
[L386,T386]=mem3f(n167,n168,n187);
[L387,T387]=mem3f(n169,n170,n190);
[L388,T388]=mem3f(n170,n171,n190);

[L389,T389]=mem3f(n172,n173,n193);%
lantai7
[L390,T390]=mem3f(n173,n174,n193);
[L391,T391]=mem3f(n174,n175,n193);
[L392,T392]=mem3f(n175,n176,n193);
[L393,T393]=mem3f(n177,n178,n198);
[L394,T394]=mem3f(n178,n179,n198);
[L395,T395]=mem3f(n179,n180,n198);
[L396,T396]=mem3f(n180,n181,n198);
[L397,T397]=mem3f(n182,n183,n203);
[L398,T398]=mem3f(n183,n184,n203);
[L399,T399]=mem3f(n184,n185,n203);
[L400,T400]=mem3f(n185,n186,n203);
[L401,T401]=mem3f(n187,n188,n208);
[L402,T402]=mem3f(n188,n189,n208);
[L403,T403]=mem3f(n190,n191,n211);
[L404,T404]=mem3f(n191,n192,n211);

[L405,T405]=mem3f(n193,n194,n214);%
lantai 8
[L406,T406]=mem3f(n194,n195,n214);
[L407,T407]=mem3f(n195,n196,n214);
[L408,T408]=mem3f(n196,n197,n214);
[L409,T409]=mem3f(n198,n199,n219);
[L410,T410]=mem3f(n199,n200,n219);
[L411,T411]=mem3f(n200,n201,n219);
[L412,T412]=mem3f(n201,n202,n219);
[L413,T413]=mem3f(n203,n204,n224);
[L414,T414]=mem3f(n204,n205,n224);
[L415,T415]=mem3f(n205,n206,n224);
[L416,T416]=mem3f(n206,n207,n224);
[L417,T417]=mem3f(n208,n209,n229);
[L418,T418]=mem3f(n209,n210,n229);
[L419,T419]=mem3f(n211,n212,n232);
[L420,T420]=mem3f(n212,n213,n232);

[L421,T421]=mem3f(n214,n215,n235);%
lantai 9
[L422,T422]=mem3f(n215,n216,n235);
[L423,T423]=mem3f(n216,n217,n235);
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[L424,T424]=mem3f(n217,n218,n235);
[L425,T425]=mem3f(n219,n220,n240);
[L426,T426]=mem3f(n220,n221,n240);
[L427,T427]=mem3f(n221,n222,n240);
[L428,T428]=mem3f(n222,n223,n240);
[L429,T429]=mem3f(n224,n225,n245);
[L430,T430]=mem3f(n225,n226,n245);
[L431,T431]=mem3f(n226,n227,n245);
[L432,T432]=mem3f(n227,n228,n245);
[L433,T433]=mem3f(n229,n230,n250);
[L434,T434]=mem3f(n230,n231,n250);
[L435,T435]=mem3f(n232,n233,n253);
[L436,T436]=mem3f(n233,n234,n253);

[L437,T437]=mem3f(n235,n236,n256);%la
ntai 10
[L438,T438]=mem3f(n236,n237,n256);
[L439,T439]=mem3f(n237,n238,n256);
[L440,T440]=mem3f(n238,n239,n256);
[L441,T441]=mem3f(n240,n241,n261);
[L442,T442]=mem3f(n241,n242,n261);
[L443,T443]=mem3f(n242,n243,n261);
[L444,T444]=mem3f(n243,n244,n261);
[L445,T445]=mem3f(n245,n246,n266);
[L446,T446]=mem3f(n246,n247,n266);
[L447,T447]=mem3f(n247,n248,n266);
[L448,T448]=mem3f(n248,n249,n266);
[L449,T449]=mem3f(n250,n251,n271);
[L450,T450]=mem3f(n251,n252,n271);
[L451,T451]=mem3f(n253,n254,n274);
[L452,T452]=mem3f(n254,n255,n274);

[L453,T453]=mem3f(n256,n257,n277);%
lantai 11
[L454,T454]=mem3f(n257,n258,n277);
[L455,T455]=mem3f(n258,n259,n277);
[L456,T456]=mem3f(n259,n260,n277);
[L457,T457]=mem3f(n261,n262,n282);
[L458,T458]=mem3f(n262,n263,n282);
[L459,T459]=mem3f(n263,n264,n282);
[L460,T460]=mem3f(n264,n265,n282);
[L461,T461]=mem3f(n266,n267,n287);
[L462,T462]=mem3f(n267,n268,n287);
[L463,T463]=mem3f(n268,n269,n287);
[L464,T464]=mem3f(n269,n270,n287);
[L465,T465]=mem3f(n271,n272,n292);
[L466,T466]=mem3f(n272,n273,n292);
[L467,T467]=mem3f(n274,n275,n295);
[L468,T468]=mem3f(n275,n276,n295);

[L469,T469]=mem3f(n277,n278,n256);%
lantai 12
[L470,T470]=mem3f(n278,n279,n256);
[L471,T471]=mem3f(n279,n280,n256);
[L472,T472]=mem3f(n280,n281,n256);
[L473,T473]=mem3f(n282,n283,n261);
[L474,T474]=mem3f(n283,n284,n261);
[L475,T475]=mem3f(n284,n285,n261);
[L476,T476]=mem3f(n285,n286,n261);
[L477,T477]=mem3f(n287,n288,n266);
[L478,T478]=mem3f(n288,n289,n266);
[L479,T479]=mem3f(n289,n290,n266);
[L480,T480]=mem3f(n290,n291,n266);
[L481,T481]=mem3f(n292,n293,n271);
[L482,T482]=mem3f(n293,n294,n271);
[L483,T483]=mem3f(n295,n296,n274);
[L484,T484]=mem3f(n296,n297,n274);

%Arah z
[L485,T485]=mem3f(n26,n31,n51);%
lantai 1

[L486,T486]=mem3f(n31,n36,n51);
[L487,T487]=mem3f(n36,n41,n51);
[L488,T488]=mem3f(n41,n46,n51);
[L489,T489]=mem3f(n27,n32,n52);
[L490,T490]=mem3f(n32,n37,n52);
[L491,T491]=mem3f(n37,n42,n52);
[L492,T492]=mem3f(n42,n47,n52);
[L493,T493]=mem3f(n28,n33,n53);
[L494,T494]=mem3f(n33,n38,n53);
[L495,T495]=mem3f(n38,n43,n53);
[L496,T496]=mem3f(n43,n48,n53);
[L497,T497]=mem3f(n29,n34,n54);
[L498,T498]=mem3f(n34,n39,n54);
[L499,T499]=mem3f(n39,n44,n54);
[L500,T500]=mem3f(n44,n49,n54);
[L501,T501]=mem3f(n30,n35,n55);
[L502,T502]=mem3f(n35,n40,n55);
[L503,T503]=mem3f(n40,n45,n55);
[L504,T504]=mem3f(n45,n50,n55);

[L505,T505]=mem3f(n51,n56,n76);%
lantai 2
[L506,T506]=mem3f(n56,n61,n76);
[L507,T507]=mem3f(n61,n66,n76);
[L508,T508]=mem3f(n66,n71,n76);
[L509,T509]=mem3f(n52,n57,n77);
[L510,T510]=mem3f(n57,n62,n77);
[L511,T511]=mem3f(n62,n67,n77);
[L512,T512]=mem3f(n67,n72,n77);
[L513,T513]=mem3f(n53,n58,n78);
[L514,T514]=mem3f(n58,n63,n78);
[L515,T515]=mem3f(n63,n68,n78);
[L516,T516]=mem3f(n68,n73,n78);
[L517,T517]=mem3f(n54,n59,n79);
[L518,T518]=mem3f(n59,n64,n79);
[L519,T519]=mem3f(n64,n69,n79);
[L520,T520]=mem3f(n69,n74,n79);
[L521,T521]=mem3f(n55,n60,n80);
[L522,T522]=mem3f(n60,n65,n80);
[L523,T523]=mem3f(n65,n70,n80);
[L524,T524]=mem3f(n70,n75,n80);

[L525,T525]=mem3f(n76,n81,n101);%
lantai 3
[L526,T526]=mem3f(n81,n86,n101);
[L527,T527]=mem3f(n86,n91,n101);
[L528,T528]=mem3f(n91,n96,n101);
[L529,T529]=mem3f(n77,n82,n102);
[L530,T530]=mem3f(n82,n87,n102);
[L531,T531]=mem3f(n87,n92,n102);
[L532,T532]=mem3f(n92,n97,n102);
[L533,T533]=mem3f(n78,n83,n103);
[L534,T534]=mem3f(n83,n88,n103);
[L535,T535]=mem3f(n88,n93,n103);
[L536,T536]=mem3f(n93,n98,n103);
[L537,T537]=mem3f(n79,n84,n104);
[L538,T538]=mem3f(n84,n89,n104);
[L539,T539]=mem3f(n89,n94,n104);
[L540,T540]=mem3f(n94,n99,n104);
[L541,T541]=mem3f(n80,n85,n105);
[L542,T542]=mem3f(n85,n90,n105);
[L543,T543]=mem3f(n90,n95,n105);
[L544,T544]=mem3f(n95,n100,n105);

[L545,T545]=mem3f(n101,n106,n126);%
lantai4
[L546,T546]=mem3f(n106,n111,n126);
[L547,T547]=mem3f(n111,n116,n126);
[L548,T548]=mem3f(n116,n121,n126);
[L549,T549]=mem3f(n102,n107,n127);
[L550,T550]=mem3f(n107,n112,n127);
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[L551,T551]=mem3f(n112,n117,n127);
[L552,T552]=mem3f(n117,n122,n127);
[L553,T553]=mem3f(n103,n108,n128);
[L554,T554]=mem3f(n108,n113,n128);
[L555,T555]=mem3f(n113,n118,n128);
[L556,T556]=mem3f(n118,n123,n128);
[L557,T557]=mem3f(n104,n109,n129);
[L558,T558]=mem3f(n109,n114,n129);
[L559,T559]=mem3f(n114,n119,n129);
[L560,T560]=mem3f(n119,n124,n129);
[L561,T561]=mem3f(n105,n110,n129);
[L562,T562]=mem3f(n110,n115,n129);
[L563,T563]=mem3f(n115,n120,n129);
[L564,T564]=mem3f(n120,n125,n129);

[L565,T565]=mem3f(n126,n131,n151);%
lantai 5
[L566,T566]=mem3f(n131,n136,n151);
[L567,T567]=mem3f(n136,n141,n151);
[L568,T568]=mem3f(n141,n146,n151);
[L569,T569]=mem3f(n127,n132,n152);
[L570,T570]=mem3f(n132,n137,n152);
[L571,T571]=mem3f(n137,n142,n152);
[L572,T572]=mem3f(n142,n147,n152);
[L573,T573]=mem3f(n128,n133,n153);
[L574,T574]=mem3f(n133,n138,n153);
[L575,T575]=mem3f(n138,n143,n153);
[L576,T576]=mem3f(n143,n148,n153);
[L577,T577]=mem3f(n129,n134,n154);
[L578,T578]=mem3f(n134,n139,n154);
[L579,T579]=mem3f(n139,n144,n154);
[L580,T580]=mem3f(n144,n149,n154);
[L581,T581]=mem3f(n130,n135,n155);
[L582,T582]=mem3f(n135,n140,n155);
[L583,T583]=mem3f(n140,n145,n155);
[L584,T584]=mem3f(n145,n150,n155);

[L585,T585]=mem3f(n151,n156,n172);%
lantai 6
[L586,T586]=mem3f(n156,n161,n172);
[L587,T587]=mem3f(n161,n166,n172);
[L588,T588]=mem3f(n166,n169,n172);
[L589,T589]=mem3f(n152,n157,n173);
[L590,T590]=mem3f(n157,n162,n173);
[L591,T591]=mem3f(n162,n167,n173);
[L592,T592]=mem3f(n167,n170,n173);
[L593,T593]=mem3f(n153,n158,n174);
[L594,T594]=mem3f(n158,n163,n174);
[L595,T595]=mem3f(n163,n168,n174);
[L596,T596]=mem3f(n168,n171,n174);
[L597,T597]=mem3f(n154,n159,n175);
[L598,T598]=mem3f(n159,n164,n175);
[L599,T599]=mem3f(n155,n160,n176);
[L600,T600]=mem3f(n160,n165,n176);

[L601,T601]=mem3f(n172,n177,n240);%
lantai 7
[L602,T602]=mem3f(n177,n182,n193);
[L603,T603]=mem3f(n182,n187,n193);
[L604,T604]=mem3f(n187,n190,n193);
[L605,T605]=mem3f(n173,n178,n194);
[L606,T606]=mem3f(n178,n183,n194);
[L607,T607]=mem3f(n183,n188,n194);
[L608,T608]=mem3f(n188,n191,n194);
[L609,T609]=mem3f(n174,n179,n195);
[L610,T610]=mem3f(n179,n184,n195);
[L611,T611]=mem3f(n184,n189,n195);
[L612,T612]=mem3f(n189,n192,n195);
[L613,T613]=mem3f(n175,n180,n196);
[L614,T614]=mem3f(n180,n185,n196);
[L615,T615]=mem3f(n176,n181,n197);

[L616,T616]=mem3f(n181,n186,n197);

[L617,T617]=mem3f(n193,n198,n214);%
lantai 8
[L618,T618]=mem3f(n198,n203,n214);
[L619,T619]=mem3f(n203,n208,n214);
[L620,T620]=mem3f(n208,n211,n214);
[L621,T621]=mem3f(n194,n199,n215);
[L622,T622]=mem3f(n199,n204,n215);
[L623,T623]=mem3f(n204,n209,n215);
[L624,T624]=mem3f(n209,n212,n215);
[L625,T625]=mem3f(n195,n200,n216);
[L626,T626]=mem3f(n200,n205,n216);
[L627,T627]=mem3f(n205,n210,n216);
[L628,T628]=mem3f(n210,n213,n216);
[L629,T629]=mem3f(n196,n201,n217);
[L630,T630]=mem3f(n201,n206,n217);
[L631,T631]=mem3f(n197,n202,n218);
[L632,T632]=mem3f(n202,n207,n218);

[L633,T633]=mem3f(n214,n219,n235);%
lantai 9
[L634,T634]=mem3f(n219,n224,n235);
[L635,T635]=mem3f(n224,n229,n235);
[L636,T636]=mem3f(n229,n232,n235);
[L637,T637]=mem3f(n215,n220,n236);
[L638,T638]=mem3f(n220,n225,n236);
[L639,T639]=mem3f(n225,n230,n236);
[L640,T640]=mem3f(n230,n233,n236);
[L641,T641]=mem3f(n216,n221,n237);
[L642,T642]=mem3f(n221,n226,n237);
[L643,T643]=mem3f(n226,n231,n237);
[L644,T644]=mem3f(n231,n234,n237);
[L645,T645]=mem3f(n217,n222,n238);
[L646,T646]=mem3f(n222,n227,n238);
[L647,T647]=mem3f(n218,n223,n239);
[L648,T648]=mem3f(n223,n228,n239);

[L649,T649]=mem3f(n235,n240,n256);%
lantai 10
[L650,T650]=mem3f(n240,n245,n256);
[L651,T651]=mem3f(n245,n250,n256);
[L652,T652]=mem3f(n250,n253,n256);
[L653,T653]=mem3f(n236,n241,n257);
[L654,T654]=mem3f(n241,n246,n257);
[L655,T655]=mem3f(n246,n251,n257);
[L656,T656]=mem3f(n251,n254,n257);
[L657,T657]=mem3f(n237,n242,n258);
[L658,T658]=mem3f(n242,n247,n258);
[L659,T659]=mem3f(n247,n252,n258);
[L660,T660]=mem3f(n252,n255,n258);
[L661,T661]=mem3f(n238,n243,n259);
[L662,T662]=mem3f(n243,n248,n259);
[L663,T663]=mem3f(n239,n244,n260);
[L664,T664]=mem3f(n244,n249,n260);

[L665,T665]=mem3f(n256,n261,n277);%
lantai 11
[L666,T666]=mem3f(n261,n266,n277);
[L667,T667]=mem3f(n266,n271,n277);
[L668,T668]=mem3f(n271,n274,n277);
[L669,T669]=mem3f(n257,n262,n278);
[L670,T670]=mem3f(n262,n267,n278);
[L671,T671]=mem3f(n267,n272,n278);
[L672,T672]=mem3f(n272,n275,n278);
[L673,T673]=mem3f(n258,n263,n279);
[L674,T674]=mem3f(n263,n268,n279);
[L675,T675]=mem3f(n268,n273,n279);
[L676,T676]=mem3f(n273,n276,n279);
[L677,T677]=mem3f(n259,n264,n280);
[L678,T678]=mem3f(n264,n269,n280);
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[L679,T679]=mem3f(n260,n265,n281);
[L680,T680]=mem3f(n265,n270,n281);

[L681,T681]=mem3f(n277,n282,n256);%
lantai 12
[L682,T682]=mem3f(n282,n287,n256);
[L683,T683]=mem3f(n287,n292,n256);
[L684,T684]=mem3f(n292,n295,n256);
[L685,T685]=mem3f(n278,n283,n257);
[L686,T686]=mem3f(n283,n288,n257);
[L687,T687]=mem3f(n288,n293,n257);
[L688,T688]=mem3f(n293,n296,n257);
[L689,T689]=mem3f(n279,n284,n258);
[L690,T690]=mem3f(n284,n289,n258);
[L691,T691]=mem3f(n289,n294,n258);
[L692,T692]=mem3f(n294,n297,n258);
[L693,T693]=mem3f(n280,n285,n259);
[L694,T694]=mem3f(n285,n290,n259);
[L695,T695]=mem3f(n281,n286,n260);
[L696,T696]=mem3f(n286,n291,n260);


E=2.5e7;
v=0.3;
G=E/(2*(1+v));

Ab1=0.15;          % balok 0.3 *0.5
Iyb1=1.125e-3;
Izb1=3.125e-3;
Jxb1=2.817e-3;

Ab2=0.12;          % balok 0.3 *0.4
Iyb2=0.9e-3;
Izb2=1.6e-3;
Jxb2=1.944e-3;

Ac1=0.5625;        % kolom 1tdasar-1t2
%0.75*0.75
Izc1=26.37e-3;
Iyc1=26.27e-3;
Jxc1=44.6e-3;

Ac2=0.4225;        % kolom lt3-5
%0.65*0.65
Izc2=14.87e-3;
Iyc2=14.87e-3;
Jxc2=25.1e-3;

Ac3=0.25;          % kolom lt6-1t8 0.5
*0.5
Izc3=5.208e-3;
Iyc3=5.208e-3;
Jxc3=8.802e-3;

Ac4=0.16;          % kolom lt9-1t11
0.4 * 0.4
Izc4=2.133e-3;
Iyc4=2.133e-3;
Jxc4=3.605e-3;

% Column
k1=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L1);
k2=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L2);
k3=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L2);
k4=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L4);
k5=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L5);
k6=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L6);
k7=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L7);
k8=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L8);
k9=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L9);
k10=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L10);
k11=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L11);

k12=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L12);

k13=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L13);
k14=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L14);
k15=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L15);
k16=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L16);
k17=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L17);
k18=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L18);.
k19=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L19);
k20=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L20);
k21=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L21);
k22=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L22);
k23=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L23);
k24=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L24);

k25=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L25);
k26=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L26);
k27=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L27);
k28=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L28);
k29=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L29);
k30=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L30);
k31=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L31);
k32=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L32);
k33=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L33);
k34=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L34);
k35=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L35);
k36=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L36);

k37=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L37);
k38=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L38);
k39=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L39);
k40=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L40);
k41=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L41);
k42=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L42);
k43=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L43);
k44=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L44);
k45=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L45);
k46=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L46);
k47=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L47);
k48=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L48);

k49=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L37);
k50=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L38);
k51=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L39);
k52=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L40);
k53=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L41);
k54=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L42);
k55=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L43);
k56=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L44);
k57=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L45);
k58=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L58);
k59=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L59);
k60=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L60);

k61=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L61);
k62=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L62);
k63=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L63);
k64=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L64);
k65=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L65);
k66=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L66);
k67=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L67);
k68=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L68);
k69=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L69);
k70=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L70);
k71=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L71);
k72=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L72);

k73=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L73);
k74=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L74);
k75=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L75);
k76=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L76);
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k77=k13f(E,G,Ac2,Iyc2,Izc2,Jxc2,L77);
k78=k13f(E,G,Ac2,Iyc2,Izc2,Jxc2,L78);
k79=k13f(E,G,Ac3,Iyc3,Izc3,Jxc3,L79);
k80=k13f(E,G,Ac3,Iyc3,Izc3,Jxc3,L80);
k81=k13f(E,G,Ac3,Iyc3,Izc3,Jxc3,L81);
k82=k13f(E,G,Ac4,Iyc4,Izc4,Jxc4,L82);
k83=k13f(E,G,Ac4,Iyc4,Izc4,Jxc4,L83);
k84=k13f(E,G,Ac4,Iyc4,Izc4,Jxc4,L84);

k85=k13f(E,G,Ac1,Iyc1,Izc1,Jxc1,L85);
k86=k13f(E,G,Ac1,Iyc1,Izc1,Jxc1,L86);
k87=k13f(E,G,Ac1,Iyc1,Izc1,Jxc1,L87);
k88=k13f(E,G,Ac2,Iyc2,Izc2,Jxc2,L88);
k89=k13f(E,G,Ac2,Iyc2,Izc2,Jxc2,L89);
k90=k13f(E,G,Ac2,Iyc2,Izc2,Jxc2,L90);
k91=k13f(E,G,Ac3,Iyc3,Izc3,Jxc3,L91);
k92=k13f(E,G,Ac3,Iyc3,Izc3,Jxc3,L92);
k93=k13f(E,G,Ac3,Iyc3,Izc3,Jxc3,L93);
k94=k13f(E,G,Ac4,Iyc4,Izc4,Jxc4,L94);
k95=k13f(E,G,Ac4,Iyc4,Izc4,Jxc4,L95);
k96=k13f(E,G,Ac4,Iyc4,Izc4,Jxc4,L96);

k97=k13f(E,G,Ac1,Iyc1,Izc1,Jxc1,L97);
k98=k13f(E,G,Ac1,Iyc1,Izc1,Jxc1,L98);
k99=k13f(E,G,Ac1,Iyc1,Izc1,Jxc1,L99);
k100=k13f(E,G,Ac2,Iyc2,Izc2,Jxc2,L100
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k101=k13f(E,G,Ac2,Iyc2,Izc2,Jxc2,L101
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k102=k13f(E,G,Ac2,Iyc2,Izc2,Jxc2,L102
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k103=k13f(E,G,Ac3,Iyc3,Izc3,Jxc3,L103
);
k104=k13f(E,G,Ac3,Iyc3,Izc3,Jxc3,L104
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k105=k13f(E,G,Ac3,Iyc3,Izc3,Jxc3,L105
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k106=k13f(E,G,Ac4,Iyc4,Izc4,Jxc4,L106
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k107=k13f(E,G,Ac4,Iyc4,Izc4,Jxc4,L107
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k108=k13f(E,G,Ac4,Iyc4,Izc4,Jxc4,L108
);

k109=k13f(E,G,Ac1,Iyc1,Izc1,Jxc1,L109
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k110=k13f(E,G,Ac1,Iyc1,Izc1,Jxc1,L110
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k111=k13f(E,G,Ac1,Iyc1,Izc1,Jxc1,L111
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k112=k13f(E,G,Ac2,Iyc2,Izc2,Jxc2,L112
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k113=k13f(E,G,Ac2,Iyc2,Izc2,Jxc2,L113
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k114=k13f(E,G,Ac2,Iyc2,Izc2,Jxc2,L114
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k115=k13f(E,G,Ac3,Iyc3,Izc3,Jxc3,L115
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k116=k13f(E,G,Ac3,Iyc3,Izc3,Jxc3,L116
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k117=k13f(E,G,Ac3,Iyc3,Izc3,Jxc3,L117
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k119=k13f(E,G,Ac4,Iyc4,Izc4,Jxc4,L119
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k120=k13f(E,G,Ac4,Iyc4,Izc4,Jxc4,L120
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k121=k13f(E,G,Ac1,Iyc1,Izc1,Jxc1,L121
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k122=k13f(E,G,Ac1,Iyc1,Izc1,Jxc1,L122
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k125=k13f(E,G,Ac2,Iyc2,Izc2,Jxc2,L125
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k126=k13f(E,G,Ac2,Iyc2,Izc2,Jxc2,L126
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k127=k13f(E,G,Ac3,Iyc3,Izc3,Jxc3,L127
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k128=k13f(E,G,Ac3,Iyc3,Izc3,Jxc3,L128
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k129=k13f(E,G,Ac3,Iyc3,Izc3,Jxc3,L129
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k130=k13f(E,G,Ac4,Iyc4,Izc4,Jxc4,L130
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k131=k13f(E,G,Ac4,Iyc4,Izc4,Jxc4,L131
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k133=k13f(E,G,Ac1,Iyc1,Izc1,Jxc1,L133
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k135=k13f(E,G,Ac1,Iyc1,Izc1,Jxc1,L135
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k137=k13f(E,G,Ac2,Iyc2,Izc2,Jxc2,L137
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k138=k13f(E,G,Ac2,Iyc2,Izc2,Jxc2,L138
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k143=k13f(E,G,Ac4,Iyc4,Izc4,Jxc4,L143
);
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k145=k13f(E,G,Ac1,Iyc1,Izc1,Jxc1,L145
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k146=k13f(E,G,Ac1,Iyc1,Izc1,Jxc1,L146
);
k147=k13f(E,G,Ac1,Iyc1,Izc1,Jxc1,L147
);
k148=k13f(E,G,Ac2,Iyc2,Izc2,Jxc2,L148
);
k149=k13f(E,G,Ac2,Iyc2,Izc2,Jxc2,L149
);
k150=k13f(E,G,Ac2,Iyc2,Izc2,Jxc2,L150
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);
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);
k153=k13f(E,G,Ac3,Iyc3,Izc3,Jxc3,L153
);
k154=k13f(E,G,Ac4,Iyc4,Izc4,Jxc4,L154
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k155=k13f(E,G,Ac4,Iyc4,Izc4,Jxc4,L155
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k156=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L156
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k157=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L157
);
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);
k159=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L159
);
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);
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);
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);
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k166=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L166
);
k167=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L167
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k169=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L169
);
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);
k171=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L171
);
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);
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);
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);
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);
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k177=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L177
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);
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k181=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L181
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k183=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L183
);
k184=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L184
);
k185=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L185
);
k186=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L186
);
k187=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L187
);
k188=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L188
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k189=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L189
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k191=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L191
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k193=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L193
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);
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k207=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L207
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k209=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L209
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k210=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L210
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k217=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L217
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k222=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L222
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k224=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L224
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k239=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L239
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k241=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L241
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k245=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L245
);
k246=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L246
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k247=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L247
);
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);
k249=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L249
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);

k251=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L251
);
k252=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L252
);
k253=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L253
);
k254=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L254
);
k255=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L255
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k256=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L256
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k257=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L257
);
k258=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L258
);
k259=kl3f(E,G,Ac3,Iyc3,Izc3,Jxc3,L259
);
k260=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L260
);
k261=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L261
);
k262=kl3f(E,G,Ac4,Iyc4,Izc4,Jxc4,L262
);

k263=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L263
);
k264=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L264
);
k265=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L265
);
k266=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L266
);
k267=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L267
);

k268=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L268
);
k269=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L269
);
k270=kl3f(E,G,Ac1,Iyc1,Izc1,Jxc1,L270
);
k271=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L271
);
k272=kl3f(E,G,Ac2,Iyc2,Izc2,Jxc2,L272
);

%Beam
%Arah x
k273=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L273
);% lantai 1
k274=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L274
);
k275=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L275
);
k276=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L276
);
k277=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L277
);
k278=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L278
);
k279=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L279
);
k280=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L280
);
k281=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L281
);
k282=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L282
);
k283=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L283
);
k284=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L284
);
k285=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L285
);
k286=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L286
);
k287=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L287
);
k288=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L288
);
k289=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L289
);
```

```
k290=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L290
);
k291=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L291
);
k292=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L292
);

k293=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L293
);% lantai 2
k294=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L294
);
k295=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L295
);
k296=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L296
);
k297=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L297
);
k298=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L298
);
k299=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L299
);
k300=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L300
);
k301=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L301
);
k302=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L302
);
k303=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L303
);
k304=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L304
);
k305=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L305
);
k306=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L306
);
k307=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L307
);
k308=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L308
);
k309=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L309
);
k310=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L310
);
k311=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L311
);
k312=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L312
);

k313=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L313
);% lantai 3
k314=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L314
);
k315=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L315
);
k316=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L316
);
k317=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L317
);
k318=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L318
);
k319=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L319
);
k320=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L320
);
k321=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L321
);
k322=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L322
);
k323=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L323
);

k324=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L324
);
k325=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L325
);
k326=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L326
);
k327=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L327
);
k328=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L328
);
k329=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L329
);
k330=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L330
);
k331=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L331
);
k332=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L332
);

k333=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L333
);% lantai 4
k334=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L334
);
k335=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L335
);
k336=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L336
);
k337=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L337
);
k338=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L338
);
k339=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L339
);
k340=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L340
);
k341=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L341
);
k342=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L342
);
k343=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L343
);
k344=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L344
);
k345=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L345
);
k346=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L346
);
k347=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L347
);
k348=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L348
);
k349=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L349
);
k350=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L350
);
k351=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L351
);
k352=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L352
);

k353=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L353
);% lantai 5
k354=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L354
);
k355=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L355
);
k356=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L356
);
k357=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L357
);
```

```
k358=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L358
);
k359=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L359
);
k360=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L360
);
k361=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L361
);
k362=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L362
);
k363=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L363
);
k364=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L364
);
k365=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L365
);
k366=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L366
);
k367=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L367
);
k368=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L368
);
k369=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L369
);
k370=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L370
);
k371=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L371
);
k372=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L372
);

k373=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L373
);% lantai 6
k374=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L374
);
k375=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L375
);
k376=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L376
);
k377=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L377
);
k378=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L378
);
k379=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L379
);
k380=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L380
);
k381=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L381
);
k382=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L382
);
k383=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L383
);
k384=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L384
);
k385=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L385
);
k386=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L386
);
k387=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L387
);
k388=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L388
);

k389=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L389
);% lantai 7
k390=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L390
);
k391=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L391
);
```

```
k392=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L392
);
k393=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L393
);
k394=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L394
);
k395=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L395
);
k396=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L396
);
k397=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L397
);
k398=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L398
);
k399=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L399
);
k400=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L400
);
k401=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L401
);
k402=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L402
);
k403=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L403
);
k404=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L404
);

k405=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L405
);% lantai 8
k406=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L406
);
k407=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L407
);
k408=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L408
);
k409=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L409
);
k410=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L410
);
k411=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L411
);
k412=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L412
);
k413=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L413
);
k414=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L414
);
k415=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L415
);
k416=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L416
);
k417=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L417
);
k418=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L418
);
k419=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L419
);
k420=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L420
);

k421=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L421
);% lantai 9
k422=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L422
);
k423=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L423
);
k424=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L424
);
k425=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L425
);
```

```
k426=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L426
);
k427=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L427
);
k428=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L428
);
k429=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L429
);
k430=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L430
);
k431=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L431
);
k432=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L432
);
k433=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L433
);
k434=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L434
);
k435=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L435
);
k436=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L436
);

k437=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L437
);% lantai 10
k438=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L438
);
k439=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L439
);
k440=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L440
);
k441=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L441
);
k442=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L442
);
k443=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L443
);
k444=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L444
);
k445=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L445
);
k446=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L446
);
k447=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L447
);
k448=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L448
);
k449=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L449
);
k450=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L450
);
k451=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L451
);
k452=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L452
);

k453=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L453
);% lantai 11
k454=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L454
);
k455=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L455
);
k456=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L456
);
k457=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L457
);
k458=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L458
);
k459=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L459
);

k460=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L460
);
k461=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L461
);
k462=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L462
);
k463=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L463
);
k464=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L464
);
k465=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L465
);
k466=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L466
);
k467=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L467
);
k468=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L468
);

k469=k13f(E,G,Ab2,Iyb2,Izb2,Jxb2,L469
);% lantai 12
k470=k13f(E,G,Ab2,Iyb2,Izb2,Jxb2,L470
);
k471=k13f(E,G,Ab2,Iyb2,Izb2,Jxb2,L471
);
k472=k13f(E,G,Ab2,Iyb2,Izb2,Jxb2,L472
);
k473=k13f(E,G,Ab2,Iyb2,Izb2,Jxb2,L473
);
k474=k13f(E,G,Ab2,Iyb2,Izb2,Jxb2,L474
);
k475=k13f(E,G,Ab2,Iyb2,Izb2,Jxb2,L475
);
k476=k13f(E,G,Ab2,Iyb2,Izb2,Jxb2,L476
);
k477=k13f(E,G,Ab2,Iyb2,Izb2,Jxb2,L477
);
k478=k13f(E,G,Ab2,Iyb2,Izb2,Jxb2,L478
);
k479=k13f(E,G,Ab2,Iyb2,Izb2,Jxb2,L479
);
k480=k13f(E,G,Ab2,Iyb2,Izb2,Jxb2,L480
);
k481=k13f(E,G,Ab2,Iyb2,Izb2,Jxb2,L481
);
k482=k13f(E,G,Ab2,Iyb2,Izb2,Jxb2,L482
);
k483=k13f(E,G,Ab2,Iyb2,Izb2,Jxb2,L483
);
k484=k13f(E,G,Ab2,Iyb2,Izb2,Jxb2,L484
);

%Arah z
k485=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L485
);% lantai 1
k486=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L486
);
k487=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L487
);
k488=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L488
);
k489=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L489
);
k490=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L490
);
k491=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L491
);
k492=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L492
);
k493=k13f(E,G,Ab1,Iyb1,Izb1,Jxb1,L493
);
```

```
k494=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L494
);
k495=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L495
);
k496=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L496
);
k497=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L497
);
k498=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L498
);
k499=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L499
);
k500=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L500
);
k501=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L501
);
k502=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L502
);
k503=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L503
);
k504=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L504
);

k505=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L505
);% lantai 2
k506=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L506
);
k507=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L507
);
k508=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L508
);
k509=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L509
);
k510=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L510
);
k511=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L511
);
k512=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L512
);
k513=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L513
);
k514=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L514
);
k515=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L515
);
k516=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L516
);
k517=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L517
);
k518=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L518
);
k519=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L519
);
k520=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L520
);
k521=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L521
);
k522=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L522
);
k523=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L523
);
k524=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L524
);

k525=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L525
);% lantai 3
k526=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L526
);
k527=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L527
);

k528=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L528
);
k529=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L529
);
k530=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L530
);
k531=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L531
);
k532=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L532
);
k533=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L533
);
k534=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L534
);
k535=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L535
);
k536=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L536
);
k537=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L537
);
k538=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L538
);
k539=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L539
);
k540=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L540
);
k541=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L541
);
k542=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L542
);
k543=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L543
);
k544=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L544
);

k545=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L545
);% lantai 4
k546=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L546
);
k547=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L547
);
k548=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L548
);
k549=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L549
);
k550=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L550
);
k551=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L551
);
k552=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L552
);
k553=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L553
);
k554=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L554
);
k555=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L555
);
k556=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L556
);
k557=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L557
);
k558=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L558
);
k559=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L559
);
k560=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L560
);
k561=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L561
);
k562=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L562
);
```

```
k563=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L563
);
k564=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L564
);

k565=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L565
);% lantai 5
k566=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L566
);
k567=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L567
);
k568=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L568
);
k569=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L569
);
k570=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L570
);
k571=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L571
);
k572=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L572
);
k573=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L573
);
k574=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L574
);
k575=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L575
);
k576=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L576
);
k577=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L577
);
k578=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L578
);
k579=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L579
);
k580=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L580
);
k581=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L581
);
k582=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L582
);
k583=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L583
);
k584=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L584
);

k585=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L585
);% lantai 6
k586=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L586
);
k587=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L587
);
k588=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L588
);
k589=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L589
);
k590=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L590
);
k591=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L591
);
k592=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L592
);
k593=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L593
);
k594=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L594
);
k595=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L595
);
k596=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L596
);

k597=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L597
);
k598=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L598
);
k599=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L599
);
k600=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L600
);

k601=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L601
);% lantai 7
k602=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L602
);
k603=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L603
);
k604=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L604
);
k605=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L605
);
k606=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L606
);
k607=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L607
);
k608=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L608
);
k609=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L609
);
k610=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L610
);
k611=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L611
);
k612=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L612
);
k613=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L613
);
k614=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L614
);
k615=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L615
);
k616=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L616
);

k617=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L617
);% lantai 8
k618=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L618
);
k619=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L619
);
k620=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L620
);
k621=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L621
);
k622=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L622
);
k623=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L623
);
k624=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L624
);
k625=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L625
);
k626=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L626
);
k627=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L627
);
k628=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L628
);
k629=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L629
);
k630=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L630
);
```

```
k631=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L631
);
k632=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L632
);

k633=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L633
);% lantai 9
k634=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L634
);
k635=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L635
);
k636=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L636
);
k637=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L637
);
k638=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L638
);
k639=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L639
);
k640=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L640
);
k641=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L641
);
k642=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L642
);
k643=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L643
);
k644=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L644
);
k645=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L645
);
k646=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L646
);
k647=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L647
);
k648=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L648
);

k649=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L649
);% lantai 10
k650=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L650
);
k651=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L651
);
k652=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L652
);
k653=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L653
);
k654=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L654
);
k655=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L655
);
k656=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L656
);
k657=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L657
);
k658=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L658
);
k659=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L659
);
k660=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L660
);
k661=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L661
);
k662=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L662
);
k663=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L663
);
k664=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L664
);

k665=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L665
);% lantai 11
k666=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L666
);
k667=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L667
);
k668=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L668
);
k669=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L669
);
k670=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L670
);
k671=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L671
);
k672=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L672
);
k673=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L673
);
k674=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L674
);
k675=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L675
);
k676=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L676
);
k677=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L677
);
k678=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L678
);
k679=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L679
);
k680=kl3f(E,G,Ab1,Iyb1,Izb1,Jxb1,L680
);

k681=kl3f(E,G,Ab2,Iyb2,Izb2,Jxb2,L681
);% lantai 12
k682=kl3f(E,G,Ab2,Iyb2,Izb2,Jxb2,L682
);
k683=kl3f(E,G,Ab2,Iyb2,Izb2,Jxb2,L683
);
k684=kl3f(E,G,Ab2,Iyb2,Izb2,Jxb2,L684
);
k685=kl3f(E,G,Ab2,Iyb2,Izb2,Jxb2,L685
);
k686=kl3f(E,G,Ab2,Iyb2,Izb2,Jxb2,L686
);
k687=kl3f(E,G,Ab2,Iyb2,Izb2,Jxb2,L687
);
k688=kl3f(E,G,Ab2,Iyb2,Izb2,Jxb2,L688
);
k689=kl3f(E,G,Ab2,Iyb2,Izb2,Jxb2,L689
);
k690=kl3f(E,G,Ab2,Iyb2,Izb2,Jxb2,L690
);
k691=kl3f(E,G,Ab2,Iyb2,Izb2,Jxb2,L691
);
k692=kl3f(E,G,Ab2,Iyb2,Izb2,Jxb2,L692
);
k693=kl3f(E,G,Ab2,Iyb2,Izb2,Jxb2,L693
);
k694=kl3f(E,G,Ab2,Iyb2,Izb2,Jxb2,L694
);
k695=kl3f(E,G,Ab2,Iyb2,Izb2,Jxb2,L695
);
k696=kl3f(E,G,Ab2,Iyb2,Izb2,Jxb2,L696
);

%Column
K1=kg(k1,T1);
K2=kg(k2,T2);
K3=kg(k3,T3);
K4=kg(k4,T4);
```

```
K5=kg(k5,T5);
K6=kg(k6,T6);
K7=kg(k7,T7);
K8=kg(k8,T8);
K9=kg(k9,T9);
K10=kg(k10,T10);
K11=kg(k11,T11);
K12=kg(k12,T12);
K13=kg(k13,T13);
K14=kg(k14,T14);
K15=kg(k15,T15);
K16=kg(k16,T16);
K17=kg(k17,T17);
K18=kg(k18,T18);
K19=kg(k19,T19);
K20=kg(k20,T20);
K21=kg(k21,T21);
K22=kg(k22,T22);
K23=kg(k23,T23);
K24=kg(k24,T24);
K25=kg(k25,T25);
K26=kg(k26,T26);
K27=kg(k27,T27);
K28=kg(k28,T28);
K29=kg(k29,T29);
K30=kg(k30,T30);
K31=kg(k31,T31);
K32=kg(k32,T32);
K33=kg(k33,T33);
K34=kg(k34,T34);
K35=kg(k35,T35);
K36=kg(k36,T36);
K37=kg(k37,T37);
K38=kg(k38,T38);
K39=kg(k39,T39);
K40=kg(k40,T40);
K41=kg(k41,T41);
K42=kg(k42,T42);
K43=kg(k43,T43);
K44=kg(k44,T44);
K45=kg(k45,T45);
K46=kg(k46,T46);
K47=kg(k47,T47);
K48=kg(k48,T48);
K49=kg(k49,T49);
K50=kg(k50,T50);
K51=kg(k51,T51);
K52=kg(k52,T52);
K53=kg(k53,T53);
K54=kg(k54,T54);
K55=kg(k55,T55);
K56=kg(k56,T56);
K57=kg(k57,T57);
K58=kg(k58,T58);
K59=kg(k59,T59);
K60=kg(k60,T60);
K61=kg(k61,T61);
K62=kg(k62,T62);
K63=kg(k63,T63);
K64=kg(k64,T64);
K65=kg(k65,T65);
K66=kg(k66,T66);
K67=kg(k67,T67);
K68=kg(k68,T68);
K69=kg(k69,T69);
K70=kg(k70,T70);
K71=kg(k71,T71);
K72=kg(k72,T72);
K73=kg(k73,T73);
K74=kg(k74,T74);
K75=kg(k75,T75);

K76=kg(k76,T76);
K77=kg(k77,T77);
K78=kg(k78,T78);
K79=kg(k79,T79);
K80=kg(k80,T80);
K81=kg(k81,T81);
K82=kg(k82,T82);
K83=kg(k83,T83);
K84=kg(k84,T84);
K85=kg(k85,T85);
K86=kg(k86,T86);
K87=kg(k87,T87);
K88=kg(k88,T88);
K89=kg(k89,T89);
K90=kg(k90,T90);
K91=kg(k91,T91);
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K93=kg(k93,T93);
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% Column
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id2=id3fs(26,51,297,25,0);
id3=id3fs(51,76,297,25,0);
id4=id3fs(76,101,297,25,0);;
id5=id3fs(101,126,297,25,0);
id6=id3fs(126,151,297,25,0);
id7=id3fs(151,172,297,25,0);
id8=id3fs(172,193,297,25,0);
id9=id3fs(193,214,297,25,0);
id10=id3fs(214,235,297,25,0);
id11=id3fs(235,256,297,25,0);
id12=id3fs(256,282,297,25,0);

id13=id3fs(2,27,297,25,1);
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id14=id3fs(27,52,297,25,0);        id80=id3fs(178,199,297,25,0);
id15=id3fs(52,77,297,25,0);        id81=id3fs(199,220,297,25,0);
id16=id3fs(77,102,297,25,0);       id82=id3fs(220,241,297,25,0);
id17=id3fs(102,127,297,25,0);      id83=id3fs(241,262,297,25,0);
id18=id3fs(127,152,297,25,0);      id84=id3fs(262,283,297,25,0);
id19=id3fs(152,173,297,25,0);
id20=id3fs(173,194,297,25,0);      id85=id3fs(8,33,297,25,1);
id21=id3fs(194,215,297,25,0);      id86=id3fs(33,58,297,25,0);
id22=id3fs(215,236,297,25,0);      id87=id3fs(58,83,297,25,0);
id23=id3fs(236,257,297,25,0);      id88=id3fs(83,108,297,25,0);
id24=id3fs(257,278,297,25,0);      id89=id3fs(108,133,297,25,0);
                                   id90=id3fs(133,158,297,25,0);
id25=id3fs(3,28,297,25,1);         id91=id3fs(158,179,297,25,0);
id26=id3fs(28,53,297,25,0);        id92=id3fs(179,200,297,25,0);
id27=id3fs(53,78,297,25,0);        id93=id3fs(200,221,297,25,0);
id28=id3fs(78,103,297,25,0);       id94=id3fs(221,242,297,25,0);
id29=id3fs(103,128,297,25,0);      id95=id3fs(242,263,297,25,0);
id30=id3fs(128,153,297,25,0);      id96=id3fs(263,284,297,25,0);
id31=id3fs(153,174,297,25,0);
id32=id3fs(174,195,297,25,0);      id97=id3fs(9,34,297,25,1);
id33=id3fs(195,216,297,25,0);      id98=id3fs(34,59,297,25,0);
id34=id3fs(216,237,297,25,0);      id99=id3fs(59,84,297,25,0);
id35=id3fs(237,258,297,25,0);      id100=id3fs(84,109,297,25,0);
id36=id3fs(258,279,297,25,0);      id101=id3fs(109,134,297,25,0);
                                   id102=id3fs(134,159,297,25,0);
id37=id3fs(4,29,297,25,1);         id103=id3fs(159,180,297,25,0);
id38=id3fs(29,54,297,25,0);        id104=id3fs(180,201,297,25,0);
id39=id3fs(54,79,297,25,0);        id105=id3fs(201,222,297,25,0);
id40=id3fs(79,104,297,25,0);       id106=id3fs(222,243,297,25,0);
id41=id3fs(104,129,297,25,0);      id107=id3fs(243,264,297,25,0);
id42=id3fs(129,154,297,25,0);      id108=id3fs(264,285,297,25,0);
id43=id3fs(154,175,297,25,0);
id44=id3fs(175,196,297,25,0);      id109=id3fs(10,35,297,25,1);
id45=id3fs(196,217,297,25,0);      id110=id3fs(35,60,297,25,0);
id46=id3fs(217,238,297,25,0);      id111=id3fs(60,85,297,25,0);
id47=id3fs(238,259,297,25,0);      id112=id3fs(85,110,297,25,0);
id48=id3fs(259,280,297,25,0);      id113=id3fs(110,135,297,25,0);
                                   id114=id3fs(135,160,297,25,0);
id49=id3fs(5,30,297,25,1);         id115=id3fs(160,181,297,25,0);
id50=id3fs(30,55,297,25,0);        id116=id3fs(181,202,297,25,0);
id51=id3fs(55,80,297,25,0);        id117=id3fs(202,223,297,25,0);
id52=id3fs(80,105,297,25,0);       id118=id3fs(223,244,297,25,0);
id53=id3fs(105,130,297,25,0);      id119=id3fs(244,265,297,25,0);
id54=id3fs(130,155,297,25,0);      id120=id3fs(265,286,297,25,0);
id55=id3fs(155,176,297,25,0);
id56=id3fs(176,197,297,25,0);      id121=id3fs(11,36,297,25,1);
id57=id3fs(197,218,297,25,0);      id122=id3fs(36,61,297,25,0);
id58=id3fs(218,239,297,25,0);      id123=id3fs(61,86,297,25,0);
id59=id3fs(239,260,297,25,0);      id124=id3fs(86,111,297,25,0);
id60=id3fs(260,281,297,25,0);      id125=id3fs(111,136,297,25,0);
                                   id126=id3fs(136,161,297,25,0);
id61=id3fs(6,31,297,25,1);         id127=id3fs(161,182,297,25,0);
id62=id3fs(31,56,297,25,0);        id128=id3fs(182,203,297,25,0);
id63=id3fs(56,81,297,25,0);        id129=id3fs(203,224,297,25,0);
id64=id3fs(81,106,297,25,0);       id130=id3fs(224,245,297,25,0);
id65=id3fs(106,131,297,25,0);      id131=id3fs(245,266,297,25,0);
id66=id3fs(131,156,297,25,0);      id132=id3fs(266,287,297,25,0);
id67=id3fs(156,177,297,25,0);
id68=id3fs(177,198,297,25,0);      id133=id3fs(12,37,297,25,1);
id69=id3fs(198,219,297,25,0);      id134=id3fs(37,62,297,25,0);
id70=id3fs(219,240,297,25,0);      id135=id3fs(62,87,297,25,0);
id71=id3fs(240,261,297,25,0);      id136=id3fs(87,112,297,25,0);
id72=id3fs(261,282,297,25,0);      id137=id3fs(112,137,297,25,0);
                                   id138=id3fs(137,162,297,25,0);
id73=id3fs(7,32,297,25,1);         id139=id3fs(162,183,297,25,0);
id74=id3fs(32,57,297,25,0);        id140=id3fs(183,204,297,25,0);
id75=id3fs(57,82,297,25,0);        id141=id3fs(204,225,297,25,0);
id76=id3fs(82,107,297,25,0);       id142=id3fs(225,246,297,25,0);
id77=id3fs(107,132,297,25,0);      id143=id3fs(246,267,297,25,0);
id78=id3fs(132,157,297,25,0);      id144=id3fs(267,288,297,25,0);
id79=id3fs(157,178,297,25,0);
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id145=id3fs(13,38,297,25,1);
id146=id3fs(38,63,297,25,0);
id147=id3fs(63,88,297,25,0);
id148=id3fs(88,113,297,25,0);
id149=id3fs(113,138,297,25,0);
id150=id3fs(138,163,297,25,0);
id151=id3fs(163,184,297,25,0);
id152=id3fs(184,205,297,25,0);
id153=id3fs(205,226,297,25,0);
id154=id3fs(226,247,297,25,0);
id155=id3fs(247,268,297,25,0);
id156=id3fs(268,289,297,25,0);

id157=id3fs(14,39,297,25,1);
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id159=id3fs(64,89,297,25,0);
id160=id3fs(89,114,297,25,0);
id161=id3fs(114,139,297,25,0);
id162=id3fs(139,164,297,25,0);
id163=id3fs(164,185,297,25,0);
id164=id3fs(185,206,297,25,0);
id165=id3fs(206,227,297,25,0);
id166=id3fs(227,248,297,25,0);
id167=id3fs(248,269,297,25,0);
id168=id3fs(269,290,297,25,0);

id169=id3fs(15,40,297,25,1);
id170=id3fs(40,65,297,25,0);
id171=id3fs(65,90,297,25,0);
id172=id3fs(90,115,297,25,0);
id173=id3fs(115,140,297,25,0);
id174=id3fs(140,165,297,25,0);
id175=id3fs(165,186,297,25,0);
id176=id3fs(186,207,297,25,0);
id177=id3fs(207,228,297,25,0);
id178=id3fs(228,249,297,25,0);
id179=id3fs(249,270,297,25,0);
id180=id3fs(270,291,297,25,0);

id181=id3fs(16,41,297,25,1);
id182=id3fs(41,66,297,25,0);
id183=id3fs(66,91,297,25,0);
id184=id3fs(91,116,297,25,0);
id185=id3fs(116,141,297,25,0);
id186=id3fs(141,166,297,25,0);
id187=id3fs(166,187,297,25,0);
id188=id3fs(187,208,297,25,0);
id189=id3fs(208,229,297,25,0);
id190=id3fs(229,250,297,25,0);
id191=id3fs(250,271,297,25,0);
id192=id3fs(271,292,297,25,0);

id193=id3fs(17,42,297,25,1);
id194=id3fs(42,67,297,25,0);
id195=id3fs(67,92,297,25,0);
id196=id3fs(92,117,297,25,0);
id197=id3fs(117,142,297,25,0);
id198=id3fs(142,167,297,25,0);
id199=id3fs(167,188,297,25,0);
id200=id3fs(188,209,297,25,0);
id201=id3fs(209,230,297,25,0);
id202=id3fs(230,251,297,25,0);
id203=id3fs(251,272,297,25,0);
id204=id3fs(272,293,297,25,0);

id205=id3fs(18,43,297,25,1);
id206=id3fs(43,68,297,25,0);
id207=id3fs(68,93,297,25,0);
id208=id3fs(93,118,297,25,0);
id209=id3fs(118,143,297,25,0);
id210=id3fs(143,168,297,25,0);

id211=id3fs(168,189,297,25,0);
id212=id3fs(189,210,297,25,0);
id213=id3fs(210,231,297,25,0);
id214=id3fs(231,252,297,25,0);
id215=id3fs(252,273,297,25,0);
id216=id3fs(273,294,297,25,0);

id217=id3fs(19,44,297,25,1);
id218=id3fs(44,69,297,25,0);
id219=id3fs(69,94,297,25,0);
id220=id3fs(94,119,297,25,0);
id221=id3fs(119,144,297,25,0);

id222=id3fs(20,45,297,25,1);
id223=id3fs(45,70,297,25,0);
id224=id3fs(70,95,297,25,0);
id225=id3fs(95,120,297,25,0);
id226=id3fs(120,145,297,25,0);

id227=id3fs(21,46,297,25,1);
id228=id3fs(46,71,297,25,0);
id229=id3fs(71,96,297,25,0);
id230=id3fs(96,121,297,25,0);
id231=id3fs(121,146,297,25,0);
id232=id3fs(146,169,297,25,0);
id233=id3fs(169,190,297,25,0);
id234=id3fs(190,211,297,25,0);
id235=id3fs(211,232,297,25,0);
id236=id3fs(232,245,297,25,0);
id237=id3fs(245,266,297,25,0);
id238=id3fs(266,287,297,25,0);

id239=id3fs(22,47,297,25,1);
id240=id3fs(47,72,297,25,0);
id241=id3fs(72,97,297,25,0);
id242=id3fs(97,122,297,25,0);
id243=id3fs(122,147,297,25,0);
id244=id3fs(147,170,297,25,0);
id245=id3fs(170,191,297,25,0);
id246=id3fs(191,212,297,25,0);
id247=id3fs(212,233,297,25,0);
id248=id3fs(233,246,297,25,0);
id249=id3fs(246,267,297,25,0);
id250=id3fs(267,288,297,25,0);

id251=id3fs(23,48,297,25,1);
id252=id3fs(48,73,297,25,0);
id253=id3fs(73,98,297,25,0);
id254=id3fs(98,123,297,25,0);
id255=id3fs(123,148,297,25,0);
id256=id3fs(148,171,297,25,0);
id257=id3fs(171,192,297,25,0);
id258=id3fs(192,213,297,25,0);
id259=id3fs(213,234,297,25,0);
id260=id3fs(234,247,297,25,0);
id261=id3fs(247,268,297,25,0);
id262=id3fs(268,289,297,25,0);

id263=id3fs(24,49,297,25,1);
id264=id3fs(49,74,297,25,0);
id265=id3fs(74,99,297,25,0);
id266=id3fs(99,124,297,25,0);
id267=id3fs(124,149,297,25,0);

id268=id3fs(25,50,297,25,1);
id269=id3fs(50,75,297,25,0);
id270=id3fs(75,100,297,25,0);
id271=id3fs(100,125,297,25,0);
id272=id3fs(125,150,297,25,0);

% Beam
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% Arah x
id273=id3fs(26,27,297,25,0);% lantai
1
id274=id3fs(27,28,297,25,0);
id275=id3fs(28,29,297,25,0);
id276=id3fs(29,30,297,25,0);
id277=id3fs(31,32,297,25,0);
id278=id3fs(32,33,297,25,0);
id279=id3fs(33,34,297,25,0);
id280=id3fs(34,35,297,25,0);
id281=id3fs(36,37,297,25,0);
id282=id3fs(37,38,297,25,0);
id283=id3fs(38,39,297,25,0);
id284=id3fs(39,40,297,25,0);
id285=id3fs(41,42,297,25,0);
id286=id3fs(42,43,297,25,0);
id287=id3fs(43,44,297,25,0);
id288=id3fs(44,45,297,25,0);
id289=id3fs(46,47,297,25,0);
id290=id3fs(47,48,297,25,0);
id291=id3fs(48,49,297,25,0);
id292=id3fs(49,50,297,25,0);

id293=id3fs(51,52,297,25,0);% lantai
2
id294=id3fs(52,53,297,25,0);
id295=id3fs(53,54,297,25,0);
id296=id3fs(54,55,297,25,0);
id297=id3fs(56,57,297,25,0);
id298=id3fs(57,58,297,25,0);
id299=id3fs(31,32,297,25,0);
id300=id3fs(32,33,297,25,0);
id301=id3fs(33,34,297,25,0);
id302=id3fs(62,63,297,25,0);
id303=id3fs(63,64,297,25,0);
id304=id3fs(64,65,297,25,0);
id305=id3fs(66,67,297,25,0);
id306=id3fs(67,68,297,25,0);
id307=id3fs(68,69,297,25,0);
id308=id3fs(69,70,297,25,0);
id309=id3fs(71,72,297,25,0);
id310=id3fs(72,73,297,25,0);
id311=id3fs(73,74,297,25,0);
id312=id3fs(74,75,297,25,0);

id313=id3fs(76,77,297,25,0);% lantai
3
id314=id3fs(77,78,297,25,0);
id315=id3fs(78,79,297,25,0);
id316=id3fs(79,80,297,25,0);
id317=id3fs(81,82,297,25,0);
id318=id3fs(82,83,297,25,0);
id319=id3fs(83,84,297,25,0);
id320=id3fs(84,85,297,25,0);
id321=id3fs(86,87,297,25,0);
id322=id3fs(87,88,297,25,0);
id323=id3fs(88,89,297,25,0);
id324=id3fs(89,90,297,25,0);
id325=id3fs(91,92,297,25,0);
id326=id3fs(92,93,297,25,0);
id327=id3fs(93,94,297,25,0);
id328=id3fs(94,95,297,25,0);
id329=id3fs(96,97,297,25,0);
id330=id3fs(97,98,297,25,0);
id331=id3fs(98,99,297,25,0);
id332=id3fs(99,100,297,25,0);

id333=id3fs(101,102,297,25,0);%
lantai 4
id334=id3fs(102,103,297,25,0);
id335=id3fs(103,104,297,25,0);
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id336=id3fs(104,105,297,25,0);
id337=id3fs(106,107,297,25,0);
id338=id3fs(107,108,297,25,0);
id339=id3fs(108,109,297,25,0);
id340=id3fs(109,110,297,25,0);
id341=id3fs(111,112,297,25,0);
id342=id3fs(112,113,297,25,0);
id343=id3fs(113,114,297,25,0);
id344=id3fs(114,115,297,25,0);
id345=id3fs(116,117,297,25,0);
id346=id3fs(117,118,297,25,0);
id347=id3fs(118,119,297,25,0);
id348=id3fs(119,120,297,25,0);
id349=id3fs(121,122,297,25,0);
id350=id3fs(122,123,297,25,0);
id351=id3fs(123,124,297,25,0);
id352=id3fs(124,125,297,25,0);

id353=id3fs(126,127,297,25,0);%
lantai 5
id354=id3fs(127,128,297,25,0);
id355=id3fs(128,129,297,25,0);
id356=id3fs(129,130,297,25,0);
id357=id3fs(131,132,297,25,0);
id358=id3fs(132,133,297,25,0);
id359=id3fs(133,134,297,25,0);
id360=id3fs(134,135,297,25,0);
id361=id3fs(136,137,297,25,0);
id362=id3fs(137,138,297,25,0);
id363=id3fs(138,139,297,25,0);
id364=id3fs(139,140,297,25,0);
id365=id3fs(141,142,297,25,0);
id366=id3fs(142,143,297,25,0);
id367=id3fs(143,144,297,25,0);
id368=id3fs(144,145,297,25,0);
id369=id3fs(146,147,297,25,0);
id370=id3fs(147,148,297,25,0);
id371=id3fs(148,149,297,25,0);
id372=id3fs(149,150,297,25,0);

id373=id3fs(151,152,297,25,0);%
lantai 6
id374=id3fs(152,153,297,25,0);
id375=id3fs(153,154,297,25,0);
id376=id3fs(154,155,297,25,0);
id377=id3fs(156,157,297,25,0);
id378=id3fs(157,158,297,25,0);
id379=id3fs(158,159,297,25,0);
id380=id3fs(159,160,297,25,0);
id381=id3fs(161,162,297,25,0);
id382=id3fs(162,163,297,25,0);
id383=id3fs(163,164,297,25,0);
id384=id3fs(164,165,297,25,0);
id385=id3fs(166,167,297,25,0);
id386=id3fs(167,168,297,25,0);
id387=id3fs(169,170,297,25,0);
id388=id3fs(170,171,297,25,0);

id389=id3fs(172,173,297,25,0);%
lantai 7
id390=id3fs(173,174,297,25,0);
id391=id3fs(174,175,297,25,0);
id392=id3fs(175,176,297,25,0);
id393=id3fs(177,178,297,25,0);
id394=id3fs(178,179,297,25,0);
id395=id3fs(179,180,297,25,0);
id396=id3fs(180,181,297,25,0);
id397=id3fs(182,183,297,25,0);
id398=id3fs(183,184,297,25,0);
id399=id3fs(184,185,297,25,0);
id400=id3fs(185,186,297,25,0);
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id401=id3fs(187,188,297,25,0);
id402=id3fs(188,189,297,25,0);
id403=id3fs(190,191,297,25,0);
id404=id3fs(191,192,297,25,0);

id405=id3fs(193,194,297,25,0);%
lantai 8
id406=id3fs(194,195,297,25,0);
id407=id3fs(195,196,297,25,0);
id408=id3fs(196,197,297,25,0);
id409=id3fs(198,199,297,25,0);
id410=id3fs(199,200,297,25,0);
id411=id3fs(200,201,297,25,0);
id412=id3fs(201,202,297,25,0);
id413=id3fs(203,204,297,25,0);
id414=id3fs(204,205,297,25,0);
id415=id3fs(205,206,297,25,0);
id416=id3fs(206,207,297,25,0);
id417=id3fs(208,209,297,25,0);
id418=id3fs(209,210,297,25,0);
id419=id3fs(211,212,297,25,0);
id420=id3fs(212,213,297,25,0);

id421=id3fs(214,215,297,25,0);%
lantai 9
id422=id3fs(215,216,297,25,0);
id423=id3fs(216,217,297,25,0);
id424=id3fs(217,218,297,25,0);
id425=id3fs(219,220,297,25,0);
id426=id3fs(220,221,297,25,0);
id427=id3fs(221,222,297,25,0);
id428=id3fs(222,223,297,25,0);
id429=id3fs(224,225,297,25,0);
id430=id3fs(225,226,297,25,0);
id431=id3fs(226,227,297,25,0);
id432=id3fs(227,228,297,25,0);
id433=id3fs(229,230,297,25,0);
id434=id3fs(230,231,297,25,0);
id435=id3fs(232,233,297,25,0);
id436=id3fs(233,234,297,25,0);

id437=id3fs(235,236,297,25,0);%
lantai 10
id438=id3fs(236,237,297,25,0);
id439=id3fs(237,238,297,25,0);
id440=id3fs(238,239,297,25,0);
id441=id3fs(240,241,297,25,0);
id442=id3fs(241,242,297,25,0);
id443=id3fs(242,243,297,25,0);
id444=id3fs(243,244,297,25,0);
id445=id3fs(245,246,297,25,0);
id446=id3fs(246,247,297,25,0);
id447=id3fs(247,248,297,25,0);
id448=id3fs(248,249,297,25,0);
id449=id3fs(250,251,297,25,0);
id450=id3fs(251,252,297,25,0);
id451=id3fs(253,254,297,25,0);
id452=id3fs(254,255,297,25,0);

id453=id3fs(256,257,297,25,0);%
lantai 11
id454=id3fs(257,258,297,25,0);
id455=id3fs(258,259,297,25,0);
id456=id3fs(259,260,297,25,0);
id457=id3fs(261,262,297,25,0);
id458=id3fs(262,263,297,25,0);
id459=id3fs(263,264,297,25,0);
id460=id3fs(264,265,297,25,0);
id461=id3fs(266,267,297,25,0);
id462=id3fs(267,268,297,25,0);
id463=id3fs(268,269,297,25,0);
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id464=id3fs(269,270,297,25,0);
id465=id3fs(271,272,297,25,0);
id466=id3fs(272,273,297,25,0);
id467=id3fs(274,275,297,25,0);
id468=id3fs(275,276,297,25,0);

id469=id3fs(277,278,297,25,0);%
lantai 12
id470=id3fs(278,279,297,25,0);
id471=id3fs(279,280,297,25,0);
id472=id3fs(280,281,297,25,0);
id473=id3fs(282,283,297,25,0);
id474=id3fs(283,284,297,25,0);
id475=id3fs(284,285,297,25,0);
id476=id3fs(285,286,297,25,0);
id477=id3fs(287,288,297,25,0);
id478=id3fs(288,289,297,25,0);
id479=id3fs(289,290,297,25,0);
id480=id3fs(290,291,297,25,0);
id481=id3fs(292,293,297,25,0);
id482=id3fs(293,294,297,25,0);
id483=id3fs(295,296,297,25,0);
id484=id3fs(296,297,297,25,0);

%Arah z
id485=id3fs(26,31,297,25,0);% lantai
1
id486=id3fs(31,36,297,25,0);
id487=id3fs(36,41,297,25,0);
id488=id3fs(41,46,297,25,0);
id489=id3fs(27,32,297,25,0);
id490=id3fs(32,37,297,25,0);
id491=id3fs(37,42,297,25,0);
id492=id3fs(42,47,297,25,0);
id493=id3fs(28,33,297,25,0);
id494=id3fs(33,38,297,25,0);
id495=id3fs(38,43,297,25,0);
id496=id3fs(43,48,297,25,0);
id497=id3fs(29,34,297,25,0);
id498=id3fs(34,39,297,25,0);
id499=id3fs(39,44,297,25,0);
id500=id3fs(44,49,297,25,0);
id501=id3fs(30,35,297,25,0);
id502=id3fs(35,40,297,25,0);
id503=id3fs(40,45,297,25,0);
id504=id3fs(45,50,297,25,0);

id505=id3fs(51,56,297,25,0);% lantai
2
id506=id3fs(56,61,297,25,0);
id507=id3fs(61,66,297,25,0);
id508=id3fs(66,71,297,25,0);
id509=id3fs(52,57,297,25,0);
id510=id3fs(57,62,297,25,0);
id511=id3fs(62,67,297,25,0);
id512=id3fs(67,72,297,25,0);
id513=id3fs(53,58,297,25,0);
id514=id3fs(58,63,297,25,0);
id515=id3fs(63,68,297,25,0);
id516=id3fs(68,73,297,25,0);
id517=id3fs(54,59,297,25,0);
id518=id3fs(59,64,297,25,0);
id519=id3fs(64,69,297,25,0);
id520=id3fs(69,74,297,25,0);
id521=id3fs(55,60,297,25,0);
id522=id3fs(60,65,297,25,0);
id523=id3fs(65,70,297,25,0);
id524=id3fs(70,75,297,25,0);

id525=id3fs(76,81,297,25,0);% lantai
3
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id526=id3fs(81,86,297,25,0);
id527=id3fs(86,91,297,25,0);
id528=id3fs(91,96,297,25,0);
id529=id3fs(77,82,297,25,0);
id530=id3fs(82,87,297,25,0);
id531=id3fs(87,92,297,25,0);
id532=id3fs(92,97,297,25,0);
id533=id3fs(78,83,297,25,0);
id534=id3fs(83,88,297,25,0);
id535=id3fs(88,93,297,25,0);
id536=id3fs(93,98,297,25,0);
id537=id3fs(79,84,297,25,0);
id538=id3fs(84,89,297,25,0);
id539=id3fs(89,94,297,25,0);
id540=id3fs(94,99,297,25,0);
id541=id3fs(80,85,297,25,0);
id542=id3fs(85,90,297,25,0);
id543=id3fs(90,95,297,25,0);
id544=id3fs(95,100,297,25,0);

id545=id3fs(101,106,297,25,0);%
lantai 4
id546=id3fs(106,111,297,25,0);
id547=id3fs(111,116,297,25,0);
id548=id3fs(116,121,297,25,0);
id549=id3fs(102,107,297,25,0);
id550=id3fs(107,112,297,25,0);
id551=id3fs(112,117,297,25,0);
id552=id3fs(117,122,297,25,0);
id553=id3fs(103,108,297,25,0);
id554=id3fs(108,113,297,25,0);
id555=id3fs(113,118,297,25,0);
id556=id3fs(118,123,297,25,0);
id557=id3fs(104,109,297,25,0);
id558=id3fs(109,114,297,25,0);
id559=id3fs(114,119,297,25,0);
id560=id3fs(119,124,297,25,0);
id561=id3fs(105,110,297,25,0);
id562=id3fs(110,115,297,25,0);
id563=id3fs(115,120,297,25,0);
id564=id3fs(120,125,297,25,0);

id565=id3fs(126,131,297,25,0);%
lantai 5
id566=id3fs(131,136,297,25,0);
id567=id3fs(136,141,297,25,0);
id568=id3fs(141,146,297,25,0);
id569=id3fs(127,132,297,25,0);
id570=id3fs(132,137,297,25,0);
id571=id3fs(137,142,297,25,0);
id572=id3fs(142,147,297,25,0);
id573=id3fs(128,133,297,25,0);
id574=id3fs(133,138,297,25,0);
id575=id3fs(138,143,297,25,0);
id576=id3fs(143,148,297,25,0);
id577=id3fs(129,134,297,25,0);
id578=id3fs(134,139,297,25,0);
id579=id3fs(139,144,297,25,0);
id580=id3fs(144,149,297,25,0);
id581=id3fs(130,135,297,25,0);
id582=id3fs(135,140,297,25,0);
id583=id3fs(140,145,297,25,0);
id584=id3fs(145,150,297,25,0);

id585=id3fs(151,156,297,25,0);%
lantai 6
id586=id3fs(156,161,297,25,0);
id587=id3fs(161,166,297,25,0);
id588=id3fs(166,169,297,25,0);
id589=id3fs(152,157,297,25,0);
id590=id3fs(157,162,297,25,0);
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id591=id3fs(162,167,297,25,0);
id592=id3fs(167,170,297,25,0);
id593=id3fs(153,158,297,25,0);
id594=id3fs(158,163,297,25,0);
id595=id3fs(163,168,297,25,0);
id596=id3fs(168,171,297,25,0);
id597=id3fs(154,159,297,25,0);
id598=id3fs(159,164,297,25,0);
id599=id3fs(155,160,297,25,0);
id600=id3fs(160,165,297,25,0);

id601=id3fs(172,177,297,25,0);%
lantai 7
id602=id3fs(177,182,297,25,0);
id603=id3fs(182,187,297,25,0);
id604=id3fs(187,190,297,25,0);
id605=id3fs(173,178,297,25,0);
id606=id3fs(178,183,297,25,0);
id607=id3fs(183,188,297,25,0);
id608=id3fs(188,191,297,25,0);
id609=id3fs(174,179,297,25,0);
id610=id3fs(179,184,297,25,0);
id611=id3fs(184,189,297,25,0);
id612=id3fs(189,192,297,25,0);
id613=id3fs(175,180,297,25,0);
id614=id3fs(180,185,297,25,0);
id615=id3fs(176,181,297,25,0);
id616=id3fs(181,186,297,25,0);

id617=id3fs(193,198,297,25,0);%
lantai 8
id618=id3fs(198,203,297,25,0);
id619=id3fs(203,208,297,25,0);
id620=id3fs(208,211,297,25,0);
id621=id3fs(194,198,297,25,0);
id622=id3fs(198,204,297,25,0);
id623=id3fs(204,209,297,25,0);
id624=id3fs(209,212,297,25,0);
id625=id3fs(195,200,297,25,0);
id626=id3fs(200,205,297,25,0);
id627=id3fs(205,210,297,25,0);
id628=id3fs(210,213,297,25,0);
id629=id3fs(196,201,297,25,0);
id630=id3fs(201,206,297,25,0);
id631=id3fs(197,202,297,25,0);
id632=id3fs(202,207,297,25,0);

id633=id3fs(214,219,297,25,0);%
lantai 9
id634=id3fs(219,224,297,25,0);
id635=id3fs(224,229,297,25,0);
id636=id3fs(229,231,297,25,0);
id637=id3fs(215,220,297,25,0);
id638=id3fs(220,225,297,25,0);
id639=id3fs(225,230,297,25,0);
id640=id3fs(230,233,297,25,0);
id641=id3fs(216,221,297,25,0);
id642=id3fs(221,226,297,25,0);
id643=id3fs(226,231,297,25,0);
id644=id3fs(231,234,297,25,0);
id645=id3fs(217,222,297,25,0);
id646=id3fs(222,227,297,25,0);
id647=id3fs(218,223,297,25,0);
id648=id3fs(223,228,297,25,0);

id649=id3fs(235,240,297,25,0);%
lantai 10
id650=id3fs(240,245,297,25,0);
id651=id3fs(245,250,297,25,0);
id652=id3fs(250,253,297,25,0);
id653=id3fs(236,241,297,25,0);
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id654=id3fs(241,246,297,25,0);        Ks=Ks+ass3f(K23,id23,tdf);
id655=id3fs(246,251,297,25,0);        Ks=Ks+ass3f(K24,id24,tdf);
id656=id3fs(251,254,297,25,0);        Ks=Ks+ass3f(K25,id25,tdf);
id657=id3fs(237,242,297,25,0);        Ks=Ks+ass3f(K26,id26,tdf);
id658=id3fs(242,247,297,25,0);        Ks=Ks+ass3f(K27,id27,tdf);
id659=id3fs(247,252,297,25,0);        Ks=Ks+ass3f(K28,id28,tdf);
id660=id3fs(252,255,297,25,0);        Ks=Ks+ass3f(K29,id29,tdf);
id661=id3fs(238,243,297,25,0);        Ks=Ks+ass3f(K30,id30,tdf);
id662=id3fs(243,248,297,25,0);        Ks=Ks+ass3f(K31,id31,tdf);
id663=id3fs(239,244,297,25,0);        Ks=Ks+ass3f(K32,id32,tdf);
id664=id3fs(244,249,297,25,0);        Ks=Ks+ass3f(K33,id33,tdf);
                                      Ks=Ks+ass3f(K34,id34,tdf);
id665=id3fs(256,261,297,25,0);%       Ks=Ks+ass3f(K35,id35,tdf);
lantai 11                             Ks=Ks+ass3f(K36,id36,tdf);
id666=id3fs(261,266,297,25,0);        Ks=Ks+ass3f(K37,id37,tdf);
id667=id3fs(266,271,297,25,0);        Ks=Ks+ass3f(K38,id38,tdf);
id668=id3fs(271,274,297,25,0);        Ks=Ks+ass3f(K39,id39,tdf);
id669=id3fs(257,262,297,25,0);        Ks=Ks+ass3f(K40,id40,tdf);
id670=id3fs(262,267,297,25,0);        Ks=Ks+ass3f(K41,id41,tdf);
id671=id3fs(267,272,297,25,0);        Ks=Ks+ass3f(K42,id42,tdf);
id672=id3fs(272,275,297,25,0);        Ks=Ks+ass3f(K43,id43,tdf);
id673=id3fs(258,263,297,25,0);        Ks=Ks+ass3f(K44,id44,tdf);
id674=id3fs(263,268,297,25,0);        Ks=Ks+ass3f(K45,id45,tdf);
id675=id3fs(268,273,297,25,0);        Ks=Ks+ass3f(K46,id46,tdf);
id676=id3fs(273,276,297,25,0);        Ks=Ks+ass3f(K47,id47,tdf);
id677=id3fs(259,264,297,25,0);        Ks=Ks+ass3f(K48,id48,tdf);
id678=id3fs(264,269,297,25,0);        Ks=Ks+ass3f(K49,id49,tdf);
id679=id3fs(260,265,297,25,0);        Ks=Ks+ass3f(K50,id50,tdf);
id680=id3fs(265,270,297,25,0);        Ks=Ks+ass3f(K51,id51,tdf);
                                      Ks=Ks+ass3f(K52,id52,tdf);
id681=id3fs(277,282,297,25,0);%       Ks=Ks+ass3f(K53,id53,tdf);
lantai 12                             Ks=Ks+ass3f(K54,id54,tdf);
id682=id3fs(282,287,297,25,0);        Ks=Ks+ass3f(K55,id55,tdf);
id683=id3fs(287,292,297,25,0);        Ks=Ks+ass3f(K56,id56,tdf);
id684=id3fs(292,295,297,25,0);        Ks=Ks+ass3f(K57,id57,tdf);
id685=id3fs(278,283,297,25,0);        Ks=Ks+ass3f(K58,id58,tdf);
id686=id3fs(283,288,297,25,0);        Ks=Ks+ass3f(K59,id59,tdf);
id687=id3fs(288,293,297,25,0);        Ks=Ks+ass3f(K60,id60,tdf);
id688=id3fs(293,296,297,25,0);        Ks=Ks+ass3f(K61,id61,tdf);
id689=id3fs(279,284,297,25,0);        Ks=Ks+ass3f(K62,id62,tdf);
id690=id3fs(284,289,297,25,0);        Ks=Ks+ass3f(K63,id63,tdf);
id691=id3fs(289,294,297,25,0);        Ks=Ks+ass3f(K64,id64,tdf);
id692=id3fs(294,297,297,25,0);        Ks=Ks+ass3f(K65,id65,tdf);
id693=id3fs(280,285,297,25,0);        Ks=Ks+ass3f(K66,id66,tdf);
id694=id3fs(285,290,297,25,0);        Ks=Ks+ass3f(K67,id67,tdf);
id695=id3fs(281,286,297,25,0);        Ks=Ks+ass3f(K68,id68,tdf);
id696=id3fs(286,291,297,25,0);        Ks=Ks+ass3f(K69,id69,tdf);
                                      Ks=Ks+ass3f(K70,id70,tdf);
tdf=1632;                             Ks=Ks+ass3f(K71,id71,tdf);
Ks=ass3f(K1,id1,tdf);                 Ks=Ks+ass3f(K72,id72,tdf);
Ks=Ks+ass3f(K2,id2,tdf);              Ks=Ks+ass3f(K73,id73,tdf);
Ks=Ks+ass3f(K3,id3,tdf);              Ks=Ks+ass3f(K74,id74,tdf);
Ks=Ks+ass3f(K4,id4,tdf);              Ks=Ks+ass3f(K75,id75,tdf);
Ks=Ks+ass3f(K5,id5,tdf);              Ks=Ks+ass3f(K76,id76,tdf);
Ks=Ks+ass3f(K6,id6,tdf);              Ks=Ks+ass3f(K77,id77,tdf);
Ks=Ks+ass3f(K7,id7,tdf);              Ks=Ks+ass3f(K78,id78,tdf);
Ks=Ks+ass3f(K8,id8,tdf);              Ks=Ks+ass3f(K79,id79,tdf);
Ks=Ks+ass3f(K9,id9,tdf);              Ks=Ks+ass3f(K80,id80,tdf);
Ks=Ks+ass3f(K10,id10,tdf);            Ks=Ks+ass3f(K81,id81,tdf);
Ks=Ks+ass3f(K11,id11,tdf);            Ks=Ks+ass3f(K82,id82,tdf);
Ks=Ks+ass3f(K12,id12,tdf);            Ks=Ks+ass3f(K83,id83,tdf);
Ks=Ks+ass3f(K13,id13,tdf);            Ks=Ks+ass3f(K84,id84,tdf);
Ks=Ks+ass3f(K14,id14,tdf);            Ks=Ks+ass3f(K85,id85,tdf);
Ks=Ks+ass3f(K15,id15,tdf);            Ks=Ks+ass3f(K86,id86,tdf);
Ks=Ks+ass3f(K16,id16,tdf);            Ks=Ks+ass3f(K87,id87,tdf);
Ks=Ks+ass3f(K17,id17,tdf);            Ks=Ks+ass3f(K88,id88,tdf);
Ks=Ks+ass3f(K18,id18,tdf);            Ks=Ks+ass3f(K89,id89,tdf);
Ks=Ks+ass3f(K19,id19,tdf);            Ks=Ks+ass3f(K90,id90,tdf);
Ks=Ks+ass3f(K20,id20,tdf);            Ks=Ks+ass3f(K91,id91,tdf);
Ks=Ks+ass3f(K21,id21,tdf);            Ks=Ks+ass3f(K92,id92,tdf);
Ks=Ks+ass3f(K22,id22,tdf);            Ks=Ks+ass3f(K93,id93,tdf);
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Ks=Ks+ass3f(K94,id94,tdf);          Ks=Ks+ass3f(K165,id165,tdf);
Ks=Ks+ass3f(K95,id95,tdf);          Ks=Ks+ass3f(K166,id166,tdf);
Ks=Ks+ass3f(K96,id96,tdf);          Ks=Ks+ass3f(K167,id167,tdf);
Ks=Ks+ass3f(K97,id97,tdf);          Ks=Ks+ass3f(K168,id168,tdf);
Ks=Ks+ass3f(K98,id98,tdf);          Ks=Ks+ass3f(K169,id169,tdf);
Ks=Ks+ass3f(K99,id99,tdf);          Ks=Ks+ass3f(K170,id170,tdf);
Ks=Ks+ass3f(K100,id100,tdf);        Ks=Ks+ass3f(K171,id171,tdf);
Ks=Ks+ass3f(K101,id101,tdf);        Ks=Ks+ass3f(K172,id172,tdf);
Ks=Ks+ass3f(K102,id102,tdf);        Ks=Ks+ass3f(K173,id173,tdf);
Ks=Ks+ass3f(K103,id103,tdf);        Ks=Ks+ass3f(K174,id174,tdf);
Ks=Ks+ass3f(K104,id104,tdf);        Ks=Ks+ass3f(K175,id175,tdf);
Ks=Ks+ass3f(K105,id105,tdf);        Ks=Ks+ass3f(K176,id176,tdf);
Ks=Ks+ass3f(K106,id106,tdf);        Ks=Ks+ass3f(K177,id177,tdf);
Ks=Ks+ass3f(K107,id107,tdf);        Ks=Ks+ass3f(K178,id178,tdf);
Ks=Ks+ass3f(K108,id108,tdf);        Ks=Ks+ass3f(K179,id179,tdf);
Ks=Ks+ass3f(K109,id109,tdf);        Ks=Ks+ass3f(K180,id180,tdf);
Ks=Ks+ass3f(K110,id110,tdf);        Ks=Ks+ass3f(K181,id181,tdf);
Ks=Ks+ass3f(K111,id111,tdf);        Ks=Ks+ass3f(K182,id182,tdf);
Ks=Ks+ass3f(K112,id112,tdf);        Ks=Ks+ass3f(K183,id183,tdf);
Ks=Ks+ass3f(K113,id113,tdf);        Ks=Ks+ass3f(K184,id184,tdf);
Ks=Ks+ass3f(K114,id114,tdf);        Ks=Ks+ass3f(K185,id185,tdf);
Ks=Ks+ass3f(K115,id115,tdf);        Ks=Ks+ass3f(K186,id186,tdf);
Ks=Ks+ass3f(K116,id116,tdf);        Ks=Ks+ass3f(K187,id187,tdf);
Ks=Ks+ass3f(K117,id117,tdf);        Ks=Ks+ass3f(K188,id188,tdf);
Ks=Ks+ass3f(K118,id118,tdf);        Ks=Ks+ass3f(K189,id189,tdf);
Ks=Ks+ass3f(K119,id119,tdf);        Ks=Ks+ass3f(K190,id190,tdf);
Ks=Ks+ass3f(K120,id120,tdf);        Ks=Ks+ass3f(K191,id191,tdf);
Ks=Ks+ass3f(K121,id121,tdf);        Ks=Ks+ass3f(K192,id192,tdf);
Ks=Ks+ass3f(K122,id122,tdf);        Ks=Ks+ass3f(K193,id193,tdf);
Ks=Ks+ass3f(K123,id123,tdf);        Ks=Ks+ass3f(K194,id194,tdf);
Ks=Ks+ass3f(K124,id124,tdf);        Ks=Ks+ass3f(K195,id195,tdf);
Ks=Ks+ass3f(K125,id125,tdf);        Ks=Ks+ass3f(K196,id196,tdf);
Ks=Ks+ass3f(K126,id126,tdf);        Ks=Ks+ass3f(K197,id197,tdf);
Ks=Ks+ass3f(K127,id127,tdf);        Ks=Ks+ass3f(K198,id198,tdf);
Ks=Ks+ass3f(K128,id128,tdf);        Ks=Ks+ass3f(K199,id199,tdf);
Ks=Ks+ass3f(K129,id129,tdf);        Ks=Ks+ass3f(K200,id200,tdf);
Ks=Ks+ass3f(K130,id130,tdf);        Ks=Ks+ass3f(K201,id201,tdf);
Ks=Ks+ass3f(K131,id131,tdf);        Ks=Ks+ass3f(K202,id202,tdf);
Ks=Ks+ass3f(K132,id132,tdf);        Ks=Ks+ass3f(K203,id203,tdf);
Ks=Ks+ass3f(K133,id133,tdf);        Ks=Ks+ass3f(K204,id204,tdf);
Ks=Ks+ass3f(K134,id134,tdf);        Ks=Ks+ass3f(K205,id205,tdf);
Ks=Ks+ass3f(K135,id135,tdf);        Ks=Ks+ass3f(K206,id206,tdf);
Ks=Ks+ass3f(K136,id136,tdf);        Ks=Ks+ass3f(K207,id207,tdf);
Ks=Ks+ass3f(K137,id137,tdf);        Ks=Ks+ass3f(K208,id208,tdf);
Ks=Ks+ass3f(K138,id138,tdf);        Ks=Ks+ass3f(K209,id209,tdf);
Ks=Ks+ass3f(K139,id139,tdf);        Ks=Ks+ass3f(K210,id210,tdf);
Ks=Ks+ass3f(K140,id140,tdf);        Ks=Ks+ass3f(K211,id211,tdf);
Ks=Ks+ass3f(K141,id141,tdf);        Ks=Ks+ass3f(K212,id212,tdf);
Ks=Ks+ass3f(K142,id142,tdf);        Ks=Ks+ass3f(K213,id213,tdf);
Ks=Ks+ass3f(K143,id143,tdf);        Ks=Ks+ass3f(K214,id214,tdf);
Ks=Ks+ass3f(K144,id144,tdf);        Ks=Ks+ass3f(K215,id215,tdf);
Ks=Ks+ass3f(K145,id145,tdf);        Ks=Ks+ass3f(K216,id216,tdf);
Ks=Ks+ass3f(K146,id146,tdf);        Ks=Ks+ass3f(K217,id217,tdf);
Ks=Ks+ass3f(K147,id147,tdf);        Ks=Ks+ass3f(K218,id218,tdf);
Ks=Ks+ass3f(K148,id148,tdf);        Ks=Ks+ass3f(K219,id219,tdf);
Ks=Ks+ass3f(K149,id149,tdf);        Ks=Ks+ass3f(K220,id220,tdf);
Ks=Ks+ass3f(K150,id150,tdf);        Ks=Ks+ass3f(K221,id221,tdf);
Ks=Ks+ass3f(K151,id151,tdf);        Ks=Ks+ass3f(K222,id222,tdf);
Ks=Ks+ass3f(K152,id152,tdf);        Ks=Ks+ass3f(K223,id223,tdf);
Ks=Ks+ass3f(K153,id153,tdf);        Ks=Ks+ass3f(K224,id224,tdf);
Ks=Ks+ass3f(K154,id154,tdf);        Ks=Ks+ass3f(K225,id225,tdf);
Ks=Ks+ass3f(K155,id155,tdf);        Ks=Ks+ass3f(K226,id226,tdf);
Ks=Ks+ass3f(K156,id156,tdf);        Ks=Ks+ass3f(K227,id227,tdf);
Ks=Ks+ass3f(K157,id157,tdf);        Ks=Ks+ass3f(K228,id228,tdf);
Ks=Ks+ass3f(K158,id158,tdf);        Ks=Ks+ass3f(K229,id229,tdf);
Ks=Ks+ass3f(K159,id159,tdf);        Ks=Ks+ass3f(K230,id230,tdf);
Ks=Ks+ass3f(K160,id160,tdf);        Ks=Ks+ass3f(K231,id231,tdf);
Ks=Ks+ass3f(K161,id161,tdf);        Ks=Ks+ass3f(K232,id232,tdf);
Ks=Ks+ass3f(K162,id162,tdf);        Ks=Ks+ass3f(K233,id233,tdf);
Ks=Ks+ass3f(K163,id163,tdf);        Ks=Ks+ass3f(K234,id234,tdf);
Ks=Ks+ass3f(K164,id164,tdf);        Ks=Ks+ass3f(K235,id235,tdf);
```

```
Ks=Ks+ass3f(K236,id236,tdf);          Ks=Ks+ass3f(K305,id305,tdf);
Ks=Ks+ass3f(K237,id237,tdf);          Ks=Ks+ass3f(K306,id306,tdf);
Ks=Ks+ass3f(K238,id238,tdf);          Ks=Ks+ass3f(K307,id307,tdf);
Ks=Ks+ass3f(K239,id239,tdf);          Ks=Ks+ass3f(K308,id308,tdf);
Ks=Ks+ass3f(K240,id240,tdf);          Ks=Ks+ass3f(K309,id309,tdf);
Ks=Ks+ass3f(K241,id241,tdf);          Ks=Ks+ass3f(K310,id310,tdf);
Ks=Ks+ass3f(K242,id242,tdf);          Ks=Ks+ass3f(K311,id311,tdf);
Ks=Ks+ass3f(K243,id243,tdf);          Ks=Ks+ass3f(K312,id312,tdf);
Ks=Ks+ass3f(K244,id244,tdf);          Ks=Ks+ass3f(K313,id313,tdf);
Ks=Ks+ass3f(K245,id245,tdf);          Ks=Ks+ass3f(K314,id314,tdf);
Ks=Ks+ass3f(K246,id246,tdf);          Ks=Ks+ass3f(K315,id315,tdf);
Ks=Ks+ass3f(K247,id247,tdf);          Ks=Ks+ass3f(K316,id316,tdf);
Ks=Ks+ass3f(K248,id248,tdf);          Ks=Ks+ass3f(K317,id317,tdf);
Ks=Ks+ass3f(K249,id249,tdf);          Ks=Ks+ass3f(K318,id318,tdf);
Ks=Ks+ass3f(K250,id250,tdf);          Ks=Ks+ass3f(K319,id319,tdf);
Ks=Ks+ass3f(K251,id251,tdf);          Ks=Ks+ass3f(K320,id320,tdf);
Ks=Ks+ass3f(K252,id252,tdf);          Ks=Ks+ass3f(K321,id321,tdf);
Ks=Ks+ass3f(K253,id253,tdf);          Ks=Ks+ass3f(K322,id322,tdf);
Ks=Ks+ass3f(K254,id254,tdf);          Ks=Ks+ass3f(K323,id323,tdf);
Ks=Ks+ass3f(K255,id255,tdf);          Ks=Ks+ass3f(K324,id324,tdf);
Ks=Ks+ass3f(K256,id256,tdf);          Ks=Ks+ass3f(K325,id325,tdf);
Ks=Ks+ass3f(K257,id257,tdf);          Ks=Ks+ass3f(K326,id326,tdf);
Ks=Ks+ass3f(K258,id258,tdf);          Ks=Ks+ass3f(K327,id327,tdf);
Ks=Ks+ass3f(K259,id259,tdf);          Ks=Ks+ass3f(K328,id328,tdf);
Ks=Ks+ass3f(K260,id260,tdf);          Ks=Ks+ass3f(K329,id329,tdf);
Ks=Ks+ass3f(K261,id261,tdf);          Ks=Ks+ass3f(K330,id330,tdf);
Ks=Ks+ass3f(K262,id262,tdf);          Ks=Ks+ass3f(K331,id331,tdf);
Ks=Ks+ass3f(K263,id263,tdf);          Ks=Ks+ass3f(K332,id332,tdf);
Ks=Ks+ass3f(K264,id264,tdf);          Ks=Ks+ass3f(K333,id333,tdf);
Ks=Ks+ass3f(K265,id265,tdf);          Ks=Ks+ass3f(K334,id334,tdf);
Ks=Ks+ass3f(K266,id266,tdf);          Ks=Ks+ass3f(K335,id335,tdf);
Ks=Ks+ass3f(K267,id267,tdf);          Ks=Ks+ass3f(K336,id336,tdf);
Ks=Ks+ass3f(K268,id268,tdf);          Ks=Ks+ass3f(K337,id337,tdf);
Ks=Ks+ass3f(K269,id269,tdf);          Ks=Ks+ass3f(K338,id338,tdf);
Ks=Ks+ass3f(K270,id270,tdf);          Ks=Ks+ass3f(K339,id339,tdf);
Ks=Ks+ass3f(K271,id271,tdf);          Ks=Ks+ass3f(K340,id340,tdf);
Ks=Ks+ass3f(K272,id272,tdf);          Ks=Ks+ass3f(K341,id341,tdf);
                                      Ks=Ks+ass3f(K342,id342,tdf);
%Beam                                 Ks=Ks+ass3f(K343,id343,tdf);
Ks=Ks+ass3f(K273,id273,tdf);          Ks=Ks+ass3f(K344,id344,tdf);
Ks=Ks+ass3f(K274,id274,tdf);          Ks=Ks+ass3f(K345,id345,tdf);
Ks=Ks+ass3f(K275,id275,tdf);          Ks=Ks+ass3f(K346,id346,tdf);
Ks=Ks+ass3f(K276,id276,tdf);          Ks=Ks+ass3f(K347,id347,tdf);
Ks=Ks+ass3f(K277,id277,tdf);          Ks=Ks+ass3f(K348,id348,tdf);
Ks=Ks+ass3f(K278,id278,tdf);          Ks=Ks+ass3f(K349,id349,tdf);
Ks=Ks+ass3f(K279,id279,tdf);          Ks=Ks+ass3f(K350,id350,tdf);
Ks=Ks+ass3f(K280,id280,tdf);          Ks=Ks+ass3f(K351,id351,tdf);
Ks=Ks+ass3f(K281,id281,tdf);          Ks=Ks+ass3f(K352,id352,tdf);
Ks=Ks+ass3f(K282,id282,tdf);          Ks=Ks+ass3f(K353,id353,tdf);
Ks=Ks+ass3f(K283,id283,tdf);          Ks=Ks+ass3f(K354,id354,tdf);
Ks=Ks+ass3f(K284,id284,tdf);          Ks=Ks+ass3f(K355,id355,tdf);
Ks=Ks+ass3f(K285,id285,tdf);          Ks=Ks+ass3f(K356,id356,tdf);
Ks=Ks+ass3f(K286,id286,tdf);          Ks=Ks+ass3f(K357,id357,tdf);
Ks=Ks+ass3f(K287,id287,tdf);          Ks=Ks+ass3f(K358,id358,tdf);
Ks=Ks+ass3f(K288,id288,tdf);          Ks=Ks+ass3f(K359,id359,tdf);
Ks=Ks+ass3f(K289,id289,tdf);          Ks=Ks+ass3f(K360,id360,tdf);
Ks=Ks+ass3f(K290,id290,tdf);          Ks=Ks+ass3f(K361,id361,tdf);
Ks=Ks+ass3f(K291,id291,tdf);          Ks=Ks+ass3f(K362,id362,tdf);
Ks=Ks+ass3f(K292,id292,tdf);          Ks=Ks+ass3f(K363,id363,tdf);
Ks=Ks+ass3f(K293,id293,tdf);          Ks=Ks+ass3f(K364,id364,tdf);
Ks=Ks+ass3f(K294,id294,tdf);          Ks=Ks+ass3f(K365,id365,tdf);
Ks=Ks+ass3f(K295,id295,tdf);          Ks=Ks+ass3f(K366,id366,tdf);
Ks=Ks+ass3f(K296,id296,tdf);          Ks=Ks+ass3f(K367,id367,tdf);
Ks=Ks+ass3f(K297,id297,tdf);          Ks=Ks+ass3f(K368,id368,tdf);
Ks=Ks+ass3f(K298,id298,tdf);          Ks=Ks+ass3f(K369,id369,tdf);
Ks=Ks+ass3f(K299,id299,tdf);          Ks=Ks+ass3f(K370,id370,tdf);
Ks=Ks+ass3f(K300,id300,tdf);          Ks=Ks+ass3f(K371,id371,tdf);
Ks=Ks+ass3f(K301,id301,tdf);          Ks=Ks+ass3f(K372,id372,tdf);
Ks=Ks+ass3f(K302,id302,tdf);          Ks=Ks+ass3f(K373,id373,tdf);
Ks=Ks+ass3f(K303,id303,tdf);          Ks=Ks+ass3f(K374,id374,tdf);
Ks=Ks+ass3f(K304,id304,tdf);          Ks=Ks+ass3f(K375,id375,tdf);
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Ks=Ks+ass3f(K376,id376,tdf);        Ks=Ks+ass3f(K447,id447,tdf);
Ks=Ks+ass3f(K377,id377,tdf);        Ks=Ks+ass3f(K448,id448,tdf);
Ks=Ks+ass3f(K378,id378,tdf);        Ks=Ks+ass3f(K449,id449,tdf);
Ks=Ks+ass3f(K379,id379,tdf);        Ks=Ks+ass3f(K450,id450,tdf);
Ks=Ks+ass3f(K380,id380,tdf);        Ks=Ks+ass3f(K451,id451,tdf);
Ks=Ks+ass3f(K381,id381,tdf);        Ks=Ks+ass3f(K452,id452,tdf);
Ks=Ks+ass3f(K382,id382,tdf);        Ks=Ks+ass3f(K453,id453,tdf);
Ks=Ks+ass3f(K383,id383,tdf);        Ks=Ks+ass3f(K454,id454,tdf);
Ks=Ks+ass3f(K384,id384,tdf);        Ks=Ks+ass3f(K455,id455,tdf);
Ks=Ks+ass3f(K385,id385,tdf);        Ks=Ks+ass3f(K456,id456,tdf);
Ks=Ks+ass3f(K386,id386,tdf);        Ks=Ks+ass3f(K457,id457,tdf);
Ks=Ks+ass3f(K387,id387,tdf);        Ks=Ks+ass3f(K458,id458,tdf);
Ks=Ks+ass3f(K388,id388,tdf);        Ks=Ks+ass3f(K459,id459,tdf);
Ks=Ks+ass3f(K389,id389,tdf);        Ks=Ks+ass3f(K460,id460,tdf);
Ks=Ks+ass3f(K390,id390,tdf);        Ks=Ks+ass3f(K461,id461,tdf);
Ks=Ks+ass3f(K391,id391,tdf);        Ks=Ks+ass3f(K462,id462,tdf);
Ks=Ks+ass3f(K392,id392,tdf);        Ks=Ks+ass3f(K463,id463,tdf);
Ks=Ks+ass3f(K393,id393,tdf);        Ks=Ks+ass3f(K464,id464,tdf);
Ks=Ks+ass3f(K394,id394,tdf);        Ks=Ks+ass3f(K465,id465,tdf);
Ks=Ks+ass3f(K395,id395,tdf);        Ks=Ks+ass3f(K466,id466,tdf);
Ks=Ks+ass3f(K396,id396,tdf);        Ks=Ks+ass3f(K467,id467,tdf);
Ks=Ks+ass3f(K397,id397,tdf);        Ks=Ks+ass3f(K468,id468,tdf);
Ks=Ks+ass3f(K398,id398,tdf);        Ks=Ks+ass3f(K469,id469,tdf);
Ks=Ks+ass3f(K399,id399,tdf);        Ks=Ks+ass3f(K470,id470,tdf);
Ks=Ks+ass3f(K400,id400,tdf);        Ks=Ks+ass3f(K471,id471,tdf);
Ks=Ks+ass3f(K401,id401,tdf);        Ks=Ks+ass3f(K472,id472,tdf);
Ks=Ks+ass3f(K402,id402,tdf);        Ks=Ks+ass3f(K473,id473,tdf);
Ks=Ks+ass3f(K403,id403,tdf);        Ks=Ks+ass3f(K474,id474,tdf);
Ks=Ks+ass3f(K404,id404,tdf);        Ks=Ks+ass3f(K475,id475,tdf);
Ks=Ks+ass3f(K405,id405,tdf);        Ks=Ks+ass3f(K476,id476,tdf);
Ks=Ks+ass3f(K406,id406,tdf);        Ks=Ks+ass3f(K477,id477,tdf);
Ks=Ks+ass3f(K407,id407,tdf);        Ks=Ks+ass3f(K478,id478,tdf);
Ks=Ks+ass3f(K408,id408,tdf);        Ks=Ks+ass3f(K479,id479,tdf);
Ks=Ks+ass3f(K409,id409,tdf);        Ks=Ks+ass3f(K480,id480,tdf);
Ks=Ks+ass3f(K410,id410,tdf);        Ks=Ks+ass3f(K481,id481,tdf);
Ks=Ks+ass3f(K411,id411,tdf);        Ks=Ks+ass3f(K482,id482,tdf);
Ks=Ks+ass3f(K412,id412,tdf);        Ks=Ks+ass3f(K483,id483,tdf);
Ks=Ks+ass3f(K413,id413,tdf);        Ks=Ks+ass3f(K484,id484,tdf);
Ks=Ks+ass3f(K414,id414,tdf);        Ks=Ks+ass3f(K485,id485,tdf);
Ks=Ks+ass3f(K415,id415,tdf);        Ks=Ks+ass3f(K486,id486,tdf);
Ks=Ks+ass3f(K416,id416,tdf);        Ks=Ks+ass3f(K487,id487,tdf);
Ks=Ks+ass3f(K417,id417,tdf);        Ks=Ks+ass3f(K488,id488,tdf);
Ks=Ks+ass3f(K418,id418,tdf);        Ks=Ks+ass3f(K489,id489,tdf);
Ks=Ks+ass3f(K419,id419,tdf);        Ks=Ks+ass3f(K490,id490,tdf);
Ks=Ks+ass3f(K420,id420,tdf);        Ks=Ks+ass3f(K491,id491,tdf);
Ks=Ks+ass3f(K421,id421,tdf);        Ks=Ks+ass3f(K492,id492,tdf);
Ks=Ks+ass3f(K422,id422,tdf);        Ks=Ks+ass3f(K493,id493,tdf);
Ks=Ks+ass3f(K423,id423,tdf);        Ks=Ks+ass3f(K494,id494,tdf);
Ks=Ks+ass3f(K424,id424,tdf);        Ks=Ks+ass3f(K495,id495,tdf);
Ks=Ks+ass3f(K425,id425,tdf);        Ks=Ks+ass3f(K496,id496,tdf);
Ks=Ks+ass3f(K426,id426,tdf);        Ks=Ks+ass3f(K497,id497,tdf);
Ks=Ks+ass3f(K427,id427,tdf);        Ks=Ks+ass3f(K498,id498,tdf);
Ks=Ks+ass3f(K428,id428,tdf);        Ks=Ks+ass3f(K499,id499,tdf);
Ks=Ks+ass3f(K429,id429,tdf);        Ks=Ks+ass3f(K500,id500,tdf);
Ks=Ks+ass3f(K430,id430,tdf);        Ks=Ks+ass3f(K501,id501,tdf);
Ks=Ks+ass3f(K431,id431,tdf);        Ks=Ks+ass3f(K502,id502,tdf);
Ks=Ks+ass3f(K432,id432,tdf);        Ks=Ks+ass3f(K503,id503,tdf);
Ks=Ks+ass3f(K433,id433,tdf);        Ks=Ks+ass3f(K504,id504,tdf);
Ks=Ks+ass3f(K434,id434,tdf);        Ks=Ks+ass3f(K505,id505,tdf);
Ks=Ks+ass3f(K435,id435,tdf);        Ks=Ks+ass3f(K506,id506,tdf);
Ks=Ks+ass3f(K436,id436,tdf);        Ks=Ks+ass3f(K507,id507,tdf);
Ks=Ks+ass3f(K437,id437,tdf);        Ks=Ks+ass3f(K508,id508,tdf);
Ks=Ks+ass3f(K438,id438,tdf);        Ks=Ks+ass3f(K509,id509,tdf);
Ks=Ks+ass3f(K439,id439,tdf);        Ks=Ks+ass3f(K510,id510,tdf);
Ks=Ks+ass3f(K440,id440,tdf);        Ks=Ks+ass3f(K511,id511,tdf);
Ks=Ks+ass3f(K441,id441,tdf);        Ks=Ks+ass3f(K512,id512,tdf);
Ks=Ks+ass3f(K442,id442,tdf);        Ks=Ks+ass3f(K513,id513,tdf);
Ks=Ks+ass3f(K443,id443,tdf);        Ks=Ks+ass3f(K514,id514,tdf);
Ks=Ks+ass3f(K444,id444,tdf);        Ks=Ks+ass3f(K515,id515,tdf);
Ks=Ks+ass3f(K445,id445,tdf);        Ks=Ks+ass3f(K516,id516,tdf);
Ks=Ks+ass3f(K446,id446,tdf);        Ks=Ks+ass3f(K517,id517,tdf);
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Ks=Ks+ass3f(K518,id518,tdf);          Ks=Ks+ass3f(K589,id589,tdf);
Ks=Ks+ass3f(K519,id519,tdf);          Ks=Ks+ass3f(K590,id590,tdf);
Ks=Ks+ass3f(K520,id520,tdf);          Ks=Ks+ass3f(K591,id591,tdf);
Ks=Ks+ass3f(K521,id521,tdf);          Ks=Ks+ass3f(K592,id592,tdf);
Ks=Ks+ass3f(K522,id522,tdf);          Ks=Ks+ass3f(K593,id593,tdf);
Ks=Ks+ass3f(K523,id523,tdf);          Ks=Ks+ass3f(K594,id594,tdf);
Ks=Ks+ass3f(K524,id524,tdf);          Ks=Ks+ass3f(K595,id595,tdf);
Ks=Ks+ass3f(K525,id525,tdf);          Ks=Ks+ass3f(K596,id596,tdf);
Ks=Ks+ass3f(K526,id526,tdf);          Ks=Ks+ass3f(K597,id597,tdf);
Ks=Ks+ass3f(K527,id527,tdf);          Ks=Ks+ass3f(K598,id598,tdf);
Ks=Ks+ass3f(K528,id528,tdf);          Ks=Ks+ass3f(K599,id599,tdf);
Ks=Ks+ass3f(K529,id529,tdf);          Ks=Ks+ass3f(K600,id600,tdf);
Ks=Ks+ass3f(K530,id530,tdf);          Ks=Ks+ass3f(K601,id601,tdf);
Ks=Ks+ass3f(K531,id531,tdf);          Ks=Ks+ass3f(K602,id602,tdf);
Ks=Ks+ass3f(K532,id532,tdf);          Ks=Ks+ass3f(K603,id603,tdf);
Ks=Ks+ass3f(K533,id533,tdf);          Ks=Ks+ass3f(K604,id604,tdf);
Ks=Ks+ass3f(K534,id534,tdf);          Ks=Ks+ass3f(K605,id605,tdf);
Ks=Ks+ass3f(K535,id535,tdf);          Ks=Ks+ass3f(K606,id606,tdf);
Ks=Ks+ass3f(K536,id536,tdf);          Ks=Ks+ass3f(K607,id607,tdf);
Ks=Ks+ass3f(K537,id537,tdf);          Ks=Ks+ass3f(K608,id608,tdf);
Ks=Ks+ass3f(K538,id538,tdf);          Ks=Ks+ass3f(K609,id609,tdf);
Ks=Ks+ass3f(K539,id539,tdf);          Ks=Ks+ass3f(K610,id610,tdf);
Ks=Ks+ass3f(K540,id540,tdf);          Ks=Ks+ass3f(K611,id611,tdf);
Ks=Ks+ass3f(K541,id541,tdf);          Ks=Ks+ass3f(K612,id612,tdf);
Ks=Ks+ass3f(K542,id542,tdf);          Ks=Ks+ass3f(K613,id613,tdf);
Ks=Ks+ass3f(K543,id543,tdf);          Ks=Ks+ass3f(K614,id614,tdf);
Ks=Ks+ass3f(K544,id544,tdf);          Ks=Ks+ass3f(K615,id615,tdf);
Ks=Ks+ass3f(K545,id545,tdf);          Ks=Ks+ass3f(K616,id616,tdf);
Ks=Ks+ass3f(K546,id546,tdf);          Ks=Ks+ass3f(K617,id617,tdf);
Ks=Ks+ass3f(K547,id547,tdf);          Ks=Ks+ass3f(K618,id618,tdf);
Ks=Ks+ass3f(K548,id548,tdf);          Ks=Ks+ass3f(K619,id619,tdf);
Ks=Ks+ass3f(K549,id549,tdf);          Ks=Ks+ass3f(K620,id620,tdf);
Ks=Ks+ass3f(K550,id550,tdf);          Ks=Ks+ass3f(K621,id621,tdf);
Ks=Ks+ass3f(K551,id551,tdf);          Ks=Ks+ass3f(K622,id622,tdf);
Ks=Ks+ass3f(K552,id552,tdf);          Ks=Ks+ass3f(K623,id623,tdf);
Ks=Ks+ass3f(K553,id553,tdf);          Ks=Ks+ass3f(K624,id624,tdf);
Ks=Ks+ass3f(K554,id555,tdf);          Ks=Ks+ass3f(K625,id625,tdf);
Ks=Ks+ass3f(K555,id555,tdf);          Ks=Ks+ass3f(K626,id626,tdf);
Ks=Ks+ass3f(K556,id556,tdf);          Ks=Ks+ass3f(K627,id627,tdf);
Ks=Ks+ass3f(K557,id557,tdf);          Ks=Ks+ass3f(K628,id628,tdf);
Ks=Ks+ass3f(K558,id558,tdf);          Ks=Ks+ass3f(K629,id629,tdf);
Ks=Ks+ass3f(K559,id559,tdf);          Ks=Ks+ass3f(K630,id630,tdf);
Ks=Ks+ass3f(K560,id560,tdf);          Ks=Ks+ass3f(K631,id631,tdf);
Ks=Ks+ass3f(K561,id561,tdf);          Ks=Ks+ass3f(K632,id632,tdf);
Ks=Ks+ass3f(K562,id562,tdf);          Ks=Ks+ass3f(K633,id633,tdf);
Ks=Ks+ass3f(K563,id563,tdf);          Ks=Ks+ass3f(K634,id634,tdf);
Ks=Ks+ass3f(K564,id564,tdf);          Ks=Ks+ass3f(K635,id635,tdf);
Ks=Ks+ass3f(K565,id565,tdf);          Ks=Ks+ass3f(K636,id636,tdf);
Ks=Ks+ass3f(K566,id566,tdf);          Ks=Ks+ass3f(K637,id637,tdf);
Ks=Ks+ass3f(K567,id567,tdf);          Ks=Ks+ass3f(K638,id638,tdf);
Ks=Ks+ass3f(K568,id568,tdf);          Ks=Ks+ass3f(K639,id639,tdf);
Ks=Ks+ass3f(K569,id569,tdf);          Ks=Ks+ass3f(K640,id640,tdf);
Ks=Ks+ass3f(K570,id570,tdf);          Ks=Ks+ass3f(K641,id641,tdf);
Ks=Ks+ass3f(K571,id571,tdf);          Ks=Ks+ass3f(K642,id642,tdf);
Ks=Ks+ass3f(K572,id572,tdf);          Ks=Ks+ass3f(K643,id643,tdf);
Ks=Ks+ass3f(K573,id573,tdf);          Ks=Ks+ass3f(K644,id644,tdf);
Ks=Ks+ass3f(K574,id574,tdf);          Ks=Ks+ass3f(K645,id645,tdf);
Ks=Ks+ass3f(K575,id575,tdf);          Ks=Ks+ass3f(K646,id646,tdf);
Ks=Ks+ass3f(K576,id576,tdf);          Ks=Ks+ass3f(K647,id647,tdf);
Ks=Ks+ass3f(K577,id577,tdf);          Ks=Ks+ass3f(K648,id648,tdf);
Ks=Ks+ass3f(K578,id578,tdf);          Ks=Ks+ass3f(K649,id649,tdf);
Ks=Ks+ass3f(K579,id579,tdf);          Ks=Ks+ass3f(K650,id650,tdf);
Ks=Ks+ass3f(K580,id580,tdf);          Ks=Ks+ass3f(K651,id651,tdf);
Ks=Ks+ass3f(K581,id581,tdf);          Ks=Ks+ass3f(K652,id652,tdf);
Ks=Ks+ass3f(K582,id582,tdf);          Ks=Ks+ass3f(K653,id653,tdf);
Ks=Ks+ass3f(K583,id583,tdf);          Ks=Ks+ass3f(K654,id654,tdf);
Ks=Ks+ass3f(K584,id584,tdf);          Ks=Ks+ass3f(K655,id655,tdf);
Ks=Ks+ass3f(K585,id585,tdf);          Ks=Ks+ass3f(K656,id666,tdf);
Ks=Ks+ass3f(K586,id586,tdf);          Ks=Ks+ass3f(K657,id657,tdf);
Ks=Ks+ass3f(K587,id587,tdf);          Ks=Ks+ass3f(K668,id668,tdf);
Ks=Ks+ass3f(K588,id588,tdf);          Ks=Ks+ass3f(K659,id659,tdf);
```

```
Ks=Ks+ass3f(K660,id660,tdf);
Ks=Ks+ass3f(K661,id661,tdf);
Ks=Ks+ass3f(K662,id662,tdf);
Ks=Ks+ass3f(K663,id663,tdf);
Ks=Ks+ass3f(K664,id664,tdf);
Ks=Ks+ass3f(K665,id665,tdf);
Ks=Ks+ass3f(K666,id666,tdf);
Ks=Ks+ass3f(K667,id667,tdf);
Ks=Ks+ass3f(K668,id668,tdf);
Ks=Ks+ass3f(K669,id669,tdf);
Ks=Ks+ass3f(K670,id670,tdf);
Ks=Ks+ass3f(K671,id671,tdf);
Ks=Ks+ass3f(K672,id672,tdf);
Ks=Ks+ass3f(K673,id673,tdf);
Ks=Ks+ass3f(K674,id674,tdf);
Ks=Ks+ass3f(K675,id675,tdf);
Ks=Ks+ass3f(K676,id676,tdf);
Ks=Ks+ass3f(K677,id677,tdf);
Ks=Ks+ass3f(K678,id678,tdf);
Ks=Ks+ass3f(K679,id679,tdf);
Ks=Ks+ass3f(K680,id680,tdf);
Ks=Ks+ass3f(K681,id681,tdf);
Ks=Ks+ass3f(K682,id682,tdf);
Ks=Ks+ass3f(K683,id683,tdf);
Ks=Ks+ass3f(K684,id684,tdf);
Ks=Ks+ass3f(K685,id685,tdf);
Ks=Ks+ass3f(K686,id686,tdf);
Ks=Ks+ass3f(K687,id687,tdf);
Ks=Ks+ass3f(K688,id688,tdf);
Ks=Ks+ass3f(K689,id689,tdf);
Ks=Ks+ass3f(K690,id690,tdf);
Ks=Ks+ass3f(K691,id691,tdf);
Ks=Ks+ass3f(K692,id692,tdf);
Ks=Ks+ass3f(K693,id693,tdf);
Ks=Ks+ass3f(K694,id694,tdf);
Ks=Ks+ass3f(K695,id695,tdf);
Ks=Ks+ass3f(K696,id696,tdf);

Kf=Ks;
nf=size(Kf);
nn=nf/2;
Rsi=zeros (1632,1);
Rsi(1570,1)=1000;
Rsi(1624,1)=1000;
dsi=Kf\Rsi;

nf=size(Kf);
nn=nf/2;

%Condensation dofs that do not relate
to rigid floor dof
Kc=kcon(Kf,816,816);

%Transformation matrix
xm=12;
ym=12;

a22=trjs((ym),(xm));
a23=trjs((ym),(xm-6));
a24=trjs((ym),(xm-12));
a25=trjs((ym),(xm-18));
a26=trjs((ym),(xm-24));
a27=trjs((ym-6),(xm));
a28=trjs((ym-6),(xm-6));
a29=trjs((ym-6),(xm-12));
a30=trjs((ym-6),(xm-18));
a31=trjs((ym-6),(xm-24));
a32=trjs((ym-12),(xm));
a33=trjs((ym-12),(xm-6));
a34=trjs((ym-12),(xm-12));
a35=trjs((ym-12),(xm-18));
a36=trjs((ym-12),(xm-24));
a37=trjs((ym-18),(xm));
a38=trjs((ym-18),(xm-6));
a39=trjs((ym-18),(xm-12));
a40=trjs((ym-18),(xm-18));
a41=trjs((ym-18),(xm-24));
a42=trjs((ym-24),(xm));
a43=trjs((ym-24),(xm-6));
a44=trjs((ym-24),(xm-12));
a45=trjs((ym-24),(xm-18));
a46=trjs((ym-24),(xm-24));

xm=10;
ym=10;

a47=trjs((ym),(xm));
a48=trjs((ym),(xm-6));
a49=trjs((ym),(xm-12));
a50=trjs((ym),(xm-18));
a51=trjs((ym),(xm-24));
a52=trjs((ym-6),(xm));
a53=trjs((ym-6),(xm-6));
a54=trjs((ym-6),(xm-12));
a55=trjs((ym-6),(xm-18));
a56=trjs((ym-6),(xm-24));
a57=trjs((ym-12),(xm));
a58=trjs((ym-12),(xm-6));
a59=trjs((ym-12),(xm-12));
a60=trjs((ym-12),(xm-18));
a61=trjs((ym-12),(xm-24));
a62=trjs((ym-18),(xm));
a63=trjs((ym-18),(xm-6));
a64=trjs((ym-18),(xm-12));
a65=trjs((ym-24),(xm));
a66=trjs((ym-24),(xm-6));
a67=trjs((ym-24),(xm-12));

Rt1=[a22;a23;a24;a25;a26;a27;a28;a29;
a30;a31;a32;a33;a34;a35;a36;a37;a38;a
39;a40;a41;a42;a43;a44;a45;a46];
Rt2=[a47;a48;a49;a50;a51;a52;a53;a54;
a55;a56;a57;a58;a59;a60;a61;a62;a63;a
64;a65;a66;a67];
Rt3=[Rt1;zeros(741,3)];
Rt4=[zeros(75,3);Rt1;zeros(666,3)];
Rt5=[zeros(150,3);Rt1;zeros(591,3)];
Rt6=[zeros(225,3);Rt1;zeros(516,3)];
Rt7=[zeros(300,3);Rt1;zeros(441,3)];
Rt8=[zeros(375,3);Rt2;zeros(378,3)];
Rt9=[zeros(438,3);Rt2;zeros(315,3)];
Rt10=[zeros(501,3);Rt2;zeros(252,3)];
Rt11=[zeros(564,3);Rt2;zeros(189,3)];
Rt12=[zeros(627,3);Rt2;zeros(126,3)];
Rt13=[zeros(690,3);Rt2;zeros(63,3)];
Rt14=[zeros(753,3);Rt2];
Rt=[Rt3 Rt4 Rt5 Rt6 Rt7 Rt8 Rt9 Rt10
Rt11 Rt12 Rt13 Rt14] ;

%Building Stiffness Matrix
K3D=Rt'*Kc*Rt;   % Matriks kekakuan
gedung ------------

%Building Displacement
R3D=zeros (36,1);
X3D=inv(K3D)*R3D;

%Building Mass Matrix
%M1=[169.101 0 0;0 169.101 0; 0 0
16233.696]; %%%%%my = 126.826
```

```
M1=[169.101 0 0;0 169.101 0; 0 0
16233.696]; %%%%%my = 126.8626

%M2=[126.826 0 0;0 126.826 0; 0 0
11160.688]; %%%%%my = 126.826
M2=[126.826 0 0;0 126.826 0; 0 0
11160.688]; %%%%%my = 126.8626

M3=[M1;zeros(33,3)];
M4=[zeros(3,3);M1;zeros(30,3)];
M5=[zeros(6,3);M1;zeros(27,3)];
M6=[zeros(9,3);M1;zeros(24,3)];
M7=[zeros(12,3);M1;zeros(21,3)];
M8=[zeros(15,3);M2;zeros(18,3)];
M9=[zeros(18,3);M2;zeros(15,3)];
M10=[zeros(21,3);M2;zeros(12,3)];
M11=[zeros(24,3);M2;zeros(9,3)];
M12=[zeros(27,3);M2;zeros(6,3)];
M13=[zeros(30,3);M2;zeros(3,3)];
M14=[zeros(33,3);M2];
M3D=[M3 M4 M5 M6 M7 M8 M9 M10 M11 M12
M13 M14];   %matriks massa


C3D=zeros(36,36);

%System matrix
[n,n]=size(K3D);
A3D=[zeros(n,n) eye(n);
    -M3D\K3D -M3D\C3D];
damp(A3D); %%%%

%---Hitungan w--------
n=size(M3D,1);
[eigv,eigval]=eig(M3D\K3D);
[cirfre,worder]=sort(sqrt(diag(eigval
)));
modeshape=eigv(:,worder);
for i=1:n;

modes(:,i)=modeshape(:,i)/modeshape(n
,i);
end
%%Stiffness Proportional Damping

w1=cirfre(1); %6.34 %GANTI YANG
SESUAI
ak=2*0.02/w1; %damping ratio = 2 %
C3D=ak*K3D;   %Matriks redaman ------
------
A3D1=[zeros(n,n) eye(n);
```

```
    -M3D\K3D -M3D\C3D];
damp(A3D1); %%%%

w2=cirfre(2); %6.34 %GANTI YANG
SESUAI
ak=2*0.02/w2; %damping ratio = 2 %
C3D=ak*K3D;   %Matriks redaman ------
------
A3D2=[zeros(n,n) eye(n);
    -M3D\K3D -M3D\C3D];
damp(A3D2); %%%%
```

Lampiran 2. Hasil Output SAP 2000

Table: Modal Periods and Frequencies

Model Number	Period Time	Frequeny Cycle/Time	Circular Freq Radians/Time
Mode 1	0.5468	1.1234	5.224
Mode 2	0.5232	1.1576	5.227
Mode 3	0.4589	1.4562	5.234

Table: Displacement At Diaphragm Center of Mass

Story	Diaphragm	Load	Point	X	Y	UX	UY	RZ
STORY12	D1	GEMPA	48	10	10	0.0024	0.0000	0.00003
STORY11	D1	GEMPA	49	10	10	0.0023	0.0000	0.00003
STORY10	D1	GEMPA	50	10	10	0.0021	0.0000	0.00003
STORY9	D1	GEMPA	51	10	10	0.0018	0.0000	0.00003
STORY8	D1	GEMPA	52	10	10	0.0016	0.0000	0.00002
STORY7	D1	GEMPA	53	10	10	0.0013	0.0000	0.00002
STORY6	D1	GEMPA	54	10	10	0.0011	0.0000	0.00002
STORY5	D1	GEMPA	55	12	12	0.0008	0.0000	0.00001
STORY4	D1	GEMPA	56	12	12	0.0006	0.0000	0.00001
STORY3	D1	GEMPA	57	12	12	0.0004	0.0000	0.00001
STORY2	D1	GEMPA	58	12	12	0.0002	0.0000	0.00000
STORY1	D1	GEMPA	59	12	12	0.0000	0.0000	0.00000

Table: Element Forces – Frames, Part 1 of 2

Frame	Station	OutputCase	CaseType	P	V2	V3	T	M2
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
837	0.00000	STATIC-1	LinStatic	854.188	79.894	3.969	3.5868	18.68

Table: Element Forces - Frames, Part 2 of 2

Frame	Station	OutputCase	M3	FrameElem	ElemStation
Text	m	Text	KN-m	Text	m
837	0.00000	STATIC-1	429.5883	837	0.00000