

## TemariKai Tool Kit - 10 Combination Multiple Centers Markings: Multiple Centers Reference Tables and Formulas

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### 10 Combination Standard Division/ 6-Part Triangle:

Divide 6-Part Triangle (must be by multiple of 3:)	<b>Formula for finding number of imperfect centers:</b> $(1/3X^2) \times 10 + 2 = \#$ of imperfect centers using 6part Triangle, where X is the number side AB is being divided by (remember, must be a multiple of 3). (To clarify the formula: multiple X times X, then divide by 3. Multiply that result by 10. Add 2.)																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">#</th> <th style="width: 20%;">Imperfect Centers</th> <th style="width: 20%;">Perfect Centers</th> </tr> </thead> <tbody> <tr><td>3</td><td>32</td><td>92</td></tr> <tr><td>6</td><td>122</td><td>362</td></tr> <tr><td>9</td><td>272</td><td>812</td></tr> <tr><td>12</td><td>482</td><td>1442</td></tr> <tr><td>15</td><td>752</td><td>2252</td></tr> <tr><td>18</td><td>1082</td><td>3242</td></tr> </tbody> </table>	#	Imperfect Centers	Perfect Centers	3	32	92	6	122	362	9	272	812	12	482	1442	15	752	2252	18	1082	3242	For example: If Triangle side is divided by 6: 6 times 6 = 36; divide 36 by 3 = 12; multiply by 10 = 120; add 2 = 122  <b>Formula for finding number of perfect centers:</b> $X^2 \times 10 + 2 = \#$ of perfect centers using 6 part Triangle, where X is the number side AB is being divided by (must be multiple of 3). (To clarify the formula: Multiple X times X, then multiple that result by 10; to that result add 2).
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	For example: If Triangle side is divided by 6: 6 times 6 = 36; multiply 36 by 10 = 360; add 2 to 360 = 362																					

### 10 Combintation Standard Division / 4-Part Diamond:

Divide 4-Part Diamond:	<b>Formula for finding number of imperfect centers:</b> $X^2 \times 10 + 2 = \#$ of imperfect centers using 4-part Triangle, where X is the number side AC is being divided by. (To clarify the formula: multiple X times X, then multiply by 10, to that result add 2.)																																																															
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#	Imperfect Centers	Perfect Centers																																																														
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#### References/Resources:

Lessons and translations (with deep appreciation): M. Mizuta.

Direct translation and translation assistance: Setsuko A., M., Koh, Kiyoko;

Publications: *Kaga Hana Temari* (ISBN4-8377-0292 -9), *Sosaku Temarizikushi* (ISBN4-8377-0696-7), *Edo Temari* (ISBN4-8377-0394-1)

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