

Most recent update: February 16, 2025




# RightStart™ Mathematics

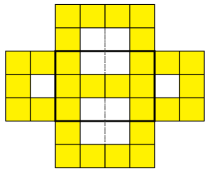
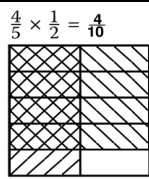
## Corrections and Updates for Grade 5 Lessons and Worksheets, second edition

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LESSON/WORKSHEET	CHANGE DATE	CORRECTION OR UPDATE
Lesson 7	04/18/2018	The Quotient and Remainder game instructions should read: Place the <b>dividend</b> card, the multiplication card, first in the row, as shown below."
Lesson 8	11/11/2020	On the second page under the Summarize heading, the second sentence should read, "... the remainder of the sum will <b>equal the sum of</b> the remainders of the two original numbers" rather than "... the remainder of the sum will add up to the remainders of the two original numbers."
Lesson 9	11/11/2020	On the first page in the middle of the page, it should read "What is 40 divided by 2? [20] Write the 2 in the <b>tens</b> place as shown below" rather than "write the 2 in the hundreds place..."
Lesson 13	10/02/2024	On the second page, right above the Worksheet 4 heading, the check number for 240 should be <b>(6)</b> , not (0).
Lesson 16      Worksheet 6	01/07/2019	The second paragraph of Information on the worksheet (and written in the lesson) should read "In the expression $3^2$ , the exponent 2 means that <b>the number 3 is multiplied two times.</b> " See attached <b>pdf</b> for the worksheet.
Lesson 18	10/09/2023	On the second page, we added an explanation for the solution for Problem 4: <b>For the first solution, <math>72 + 32</math>, see the seven beads on the seven rows, then add the three beads on the three rows. For the second solution, <math>10 \times 3 + 7 \times 4</math>, mentally combine the first three rows, removing the gap between the seven beads and the three beads. This will then show <math>10 \times 3</math>. Then the remaining seven beads on the four rows create the additional <math>7 \times 4</math>.</b>
Lesson 24	10/06/2020	On the second page after the second set of abacuses, it should read "Next tell her... add 15 hundredths and 6 <b>hundredths</b> ", not 6 hundreds.
Lesson 40      Worksheet 29	01/07/2019	In the warm-up, the second sentence referring to dividing by the same number has been removed. See attached <b>pdf</b> .
Lesson 41	12/29/2017	On the second page in the middle of the page at the end of the paragraph, it should read "What is the expression after multiplying by <b>10</b> ? [7.5/5]" It previously read 100.

Lesson 46	08/22/2023  03/27/2019	<p>In the first paragraph, Introducing long division, the second set of graphics, a explanation was added on the right: In this example of <math>195 \div 21</math>, the quotient, 9, is provided here because the focus is on writing the product of <math>21 \times 9</math>, not finding how many 21s are in 195. Finding the quotient will be taught in a future lesson.</p> <p>Under the section Finding Remainders, the last example should read <math>26 \overline{)210}</math> with <b>8 as the quotient and 2 as the remainder</b>, not 7 as the quotient and 28 as the remainder.</p>																																																														
Lesson 51	10/10/2022	On the second page, the the explanation should read "... divide <b>5 by 12</b> on the calculator ..." rather than "... divide 12 by 5 on the calculator ..."																																																														
Lesson 54      Worksheet 42-B	12/29/2017	The last equation in the "<, >, or =" section should read <b><math>87 \times 32.5 \div 87</math></b> , not $87 \div 32.5 \times 87$ as printed. Answer is the lesson book is correct.																																																														
Lesson 57	03/17/2019	On the second page, at the bottom of the "Squaring a sum" paragraph, the equation should read $(3 + 2)^2 = 3^2 + 2^2 + 2 \times (3 \times 2)$ , not $(3 + 2)^2 = 3^2 + 2^2 + 2 \times (3 + 2)$ .																																																														
Lesson 58	01/13/2025	On the second page, at the end of the first paragraph under Square roots on a calculator, the answer for the square root of 31 is close to <b>5.6</b> , not 5.5.																																																														
Lesson 60      Worksheet 48	12/28/2022	<p>Problem 1 should ask for measurements <b>in centimeters</b>, not tenths of a centimeter. Problem 2 should ask for measurements in <b>hundredths of a centimeter</b> for Figure 4, not tenth of a centimeter. See attached <b>PDF</b>.</p> <p>In the lesson, the solutions for Problem 2, Figure 4 Side of C should be <b>3.30 cm</b>, not 3.3 cm.</p>																																																														
Lesson 60	07/02/2024	A note has been added next to the answers for Problem 2, Figure 4: <b>The actual calculation for <math>\sqrt{10.73}</math> is 3.27566787083. Although many will round the answer to 3.28 cm, measuring 3.28 cm precisely with the provided tools is not possible. Therefore, if the child records 3.28 cm as the Side of C, it is correct. Then, the measurement of 3.3 cm, given rounding, is "the same" as the calculated measurement.</b>																																																														
Lesson 61	06/22/2023	<p>The three answers Problem 1, Figure C, are wrong. Correct answers are highlighted.</p> <table border="1" data-bbox="987 1409 1464 1671"> <thead> <tr> <th rowspan="2"></th> <th colspan="3">Figure B</th> <th colspan="3">Figure C</th> </tr> <tr> <th>1 small square</th> <th>2 small squares</th> <th>Large square</th> <th>1 small square</th> <th>2 small squares</th> <th>Large square</th> </tr> </thead> <tbody> <tr> <td>Area in </td> <td>4</td> <td>8</td> <td>8</td> <td>8</td> <td>16</td> <td>16</td> </tr> <tr> <td>Side in cm</td> <td>5</td> <td></td> <td>7</td> <td>7</td> <td></td> <td>10</td> </tr> <tr> <td>Area in cm<sup>2</sup></td> <td>25</td> <td>50</td> <td>49</td> <td>49</td> <td>98</td> <td>100</td> </tr> <tr> <td>Side in mm</td> <td>50</td> <td></td> <td>70</td> <td>70</td> <td></td> <td>100</td> </tr> <tr> <td>Area in mm<sup>2</sup></td> <td>2500</td> <td>5000</td> <td>4900</td> <td>4900</td> <td>9,800</td> <td>10,000</td> </tr> <tr> <td>Side in in.</td> <td>2</td> <td></td> <td>2.8</td> <td>2.8</td> <td></td> <td>3.9</td> </tr> <tr> <td>Area in in<sup>2</sup></td> <td>4</td> <td>8</td> <td>7.8</td> <td>7.8</td> <td>15.6</td> <td>15.2</td> </tr> </tbody> </table>		Figure B			Figure C			1 small square	2 small squares	Large square	1 small square	2 small squares	Large square	Area in 	4	8	8	8	16	16	Side in cm	5		7	7		10	Area in cm <sup>2</sup>	25	50	49	49	98	100	Side in mm	50		70	70		100	Area in mm <sup>2</sup>	2500	5000	4900	4900	9,800	10,000	Side in in.	2		2.8	2.8		3.9	Area in in <sup>2</sup>	4	8	7.8	7.8	15.6	15.2
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Lesson 64	04/18/2018	The answer for the last question in the Warm up should be "multiply a side by <b>itself</b> or $A = s^2$ ," not "multiply a side by 4 or $A = s^2$ ."																																																														
Lesson 64      Worksheet 52	04/11/2018	In the last chart on the page, the middle heading should read <b>Boundary Pairs – 1</b> , not Boundary Pairs. See attached <b>pdf</b> .																																																														

Lesson 66	Worksheet 54	04/18/2018	Questions should read "Are the formulas for finding... <b>all</b> correct?", not "Are the formulas for finding... are correct?" See attached <b>pdf</b> .
Lesson 67		01/07/2019	The height measurements for the second and third triangles in Problem 2 should be 1.2, not 1.0. This changes the area to 0.78 in <sup>2</sup> , not 0.7 in <sup>2</sup> . See attached <b>pdf</b> for the second page of the lesson.
Lesson 67	Worksheet 55	01/07/2019	The instructions and figures have changed slightly. See attached <b>pdf</b> .
Lesson 70		03/01/2023	On page two, the formula for the bottom triangle should read "A( <b>bottom</b> ) = $\frac{1}{2}w_2h$ " not "A(top) = $\frac{1}{2}w_2h$ ."
Lesson 70	Worksheet 58	01/07/2019	The second sentence in Question 1 should read, " <b>Use a tangram</b> to draw the height for both triangles using the horizontal lines <b>as the base</b> ." See attached <b>pdf</b> .
Lesson 73		05/04/2021	On the second page under Finding Volume, the second paragraph should ask the child to make <b>three</b> more identical arrays, not four more.
Lesson 74		02/16/2025	On the top of the second page, the explanation should reference that <b>ten</b> square panels will be missing, not two panels. Also added is a diagram of one way the construction could work. 
Lesson 75		02/15/2018	On the second page, the calculation for the triangular prism should read $\frac{1}{2} \times 2.5 \times 2.1$ <b>for the base</b> , calculating the <b>volume at 19.7 cm<sup>3</sup></b> .
Lesson 76		04/11/2018	On the second page, last paragraph under the Problem 4 heading, the answer should read <b>1,000,000,000</b> , not 1,000,000.000.
Lesson 78		08/22/2023	The answers for the first page of the worksheet, finding the area of the trapezoid, should have an answer of 21.6 m <sup>2</sup> , not 21.6 m.
Lesson 91		04/18/2018	First answer for the warm up should be $7 \frac{11}{9} = 8 \frac{2}{9}$ , not $8 \frac{2}{5}$ .
Lesson 91		10/10/2022	On the second page, at the end of the second paragraph under Finding more multiples, it should read "Try it for 8 and 6: Is <b>16 a multiple of 6?</b> [no] Is <b>24 a multiple of 6?</b> [yes] So a common multiple of 8 and 6 is 24." The next paragraph should read "Starting with 9, is <b>9 a multiple of 7?</b> [no] Is <b>18 a multiple of 7?</b> [no] Continue until you get to 63. Ask: Is <b>63 a multiple of 7?</b> [yes] The first common multiple of 9 and 7 is 63."
Lesson 94		04/18/2018	Answer for the third Warm Up problem should be <b>1 17/30</b> .
Lesson 99		12/15/2019	The graphic for the fourth equation is incorrect. Here is the corrected answer. $\frac{4}{5} \times \frac{1}{2} = \frac{4}{10}$ 

Lesson 106	01/07/2019	The answers for the previous day's worksheets has an incorrect answer (although it is right for Lesson 105). The third expression in the second column, $5/6 \div 4/6$ , should be <b>5/4</b> , not 4/3.
Lesson 116	06/03/2020	On the second page, for possibility 3 as part of Problem 2, add the clarifier that the one-way street <b>goes south</b> . For possibility 4, add the clarifier that the one-way streets <b>go south and go east</b> . Answers are NS <b>NE</b> WE WS.
Lesson 117	10/06/2020	An explanation was added across from the six combinations of tiles: <b>Some children may need encouragement to approach the combinations systematically. For example, if blue is the first tile, what are the other possibilities? If the red tile is the first tile, where could the blue and yellow tiles go?</b> A second explanation was added across from the question about the number of possibilities for the first position: <b>The first position is the first tile in the sequence, the second position is the middle tile, and the third position is the last tile.</b>
Lesson 117 Worksheet 98	10/06/2020	Problem 3 has been changed slightly. It now reads "A unicycling relay team has four members <b>either male or female</b> . The team captain decides the order that they race. How many possibilities are there?"
Lesson 120	03/26/2019	The warm up has the child divide 48 by 8 then 6 and the lesson gives the answer for dividing by 48 by 6 then 8. The lesson book should read 48: 8) 17418.24 is <b>2177.28</b> , not 2903.24, then 6) 2177.28 is 362.88 which is correct.
Lesson 125	10/06/2020	A partial product is in error. It should read <b>4029120</b> , not 4929120. $\begin{array}{r} 2014.56 \quad (0) \\ \times 24 \quad (6) \\ \hline 805824 \\ 4029120 \\ \hline 48349.44 \quad (0) \end{array}$
Lesson 131	04/18/2018	Last question in the conclusion should read: What is 20 millimeters divided by <b>1 centimeter</b> ? [2], not What is 20 millimeters divided by 10 centimeters? [2]
Lesson 134 Worksheet 115	04/18/2018	Information at the top of the page, conversion for km needs to read: 1 km = <b>1000 m</b> , not 1000 cm. See attached <b>pdf</b> .
Lesson 134 Worksheet 115	08/01/2021	The last question in Problem 3 should read: Round your answer to one decimal <b>place</b> , not one decimal point.
Lesson 136	10/01/2020	On the second page in the middle of the page below the equation $t = 1 \text{ hr}/200 \text{ km} \times 282 \text{ km} = 1.41 \text{ hr}$ , it uses dimensional analysis to change <b>.41</b> hours, not .42, to minutes. The next equation should read <b>.41</b> hr $\times 60 \text{ min}/1 \text{ hr} = 24.6 \text{ min}$ , not $.42 \text{ hr} \times 60 \text{ min}/1 \text{ hr} = 25.2 \text{ min}$ .

Lesson 136		12/15/2019	<p>On the top of the second page, after the third word problem, the following three paragraphs are added.</p> <p><b>Ask him to identify what he knows [distance and rate] and what he is looking for. [time]</b></p> <p><b>Refer to the previously written formula, rate = distance/time and write: time = distance/rate.</b></p> <p><b>Say: This is another way we could write this relationship. Using this, solve the problem. Solution is below.</b></p> <p>An explanation was also added: <b>Sometimes putting in a "simple" number, like <math>3 = 6/2</math> in place of <math>r = d/t</math>, helps identify other ways to write the equation, such as <math>2 = 6/3</math> or <math>t = d/r</math>.</b></p>
Lesson 137	Worksheet 118	12/15/2019	<p>The dimensions for the carton have been changed to <b>9.7 cm × 9.5 cm × 19.2 cm</b>, not 9.3 cm × 9.3 cm × 18.7 cm.</p> <p>The volume of the carton is <b>1769 cm<sup>3</sup></b>, not 1617 cm<sup>3</sup>.</p>
Lesson 139		04/18/2018	<p>Answer for Worksheet 120-A, under the &lt;, &gt;, or = section, 45 days <b>&lt;</b> 2 months.</p>
Lesson 142		07/24/2024	<p>On the second page, third paragraph under the Follow-up Question heading, the third question should read "What are <b>six</b> names for a square? [rhombus, rectangle, <b>kite</b>, parallelogram, quadrilateral, and polygon]" not five names for a square with the omission of "kite."</p>
Lesson 142	Worksheet 123	04/18/2018	<p>Second to last question and answer for Worksheet 123 should read: What is the name of a quadrilateral with only two sides <b>parallel</b>? Answer trapezoid is correct. See attached <b>pdf</b>.</p>
Lesson 145		07/02/2024	<p>In the warm up, the first answer should be [90°, 360 ÷ <b>4</b>], not [90°, 360 ÷ 90].</p>
Lesson 146		01/19/2024	<p>On the second page, the Enrichment question should read "What are two methods you can use to find the area in the triangle <b>surrounding</b> the square?", not surrounded by the square.</p>
Lesson 150	Worksheet 130-1	01/07/2019	<p>Question 22, 151.89 × 8.3 should be <b>1260.687</b>, not 1260.678.</p>
Lesson 150	Worksheet 130-3	12/16/2019	<p>Question 74 has been changed to "How many <b>faces</b> does a <b>hexagonal</b> prism have?" Answer is <b>8</b>, not 6.</p>
Lesson 150	Worksheet 130-4	11/16/2020	<p>On the top of page 301, it should say to plot point <i>D</i> to make figure <i>ABCD</i> a <b>rectangle</b>, not a square.</p>

**Warm-Up**

Divide. Use check numbers to check your answers.

$$4 \overline{)98765}$$

$$6 \overline{)98765}$$

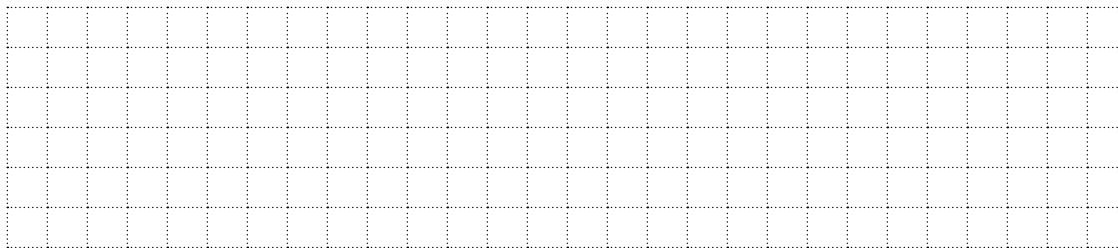
$$8 \overline{)98765}$$

**INFORMATION:** *Exponents* are a shortcut way of writing a number multiplied by itself a number of times. The exponent is the small number written above the line.

In the expression  $3^2$ , the exponent 2 means that the number 3 is multiplied *two* times. It means  $3 \times 3$ . We usually read it as *3 squared*. In the same way,  $4^2$  means  $4 \times 4$ .

Write 5 squared using exponents and using multiplication. \_\_\_\_\_

Draw  $1^2$ ,  $2^2$ ,  $3^2$ ,  $4^2$ , and  $5^2$  squares on the grid below. Label them and find the values.



On the multiplication table, evaluate and circle  $1^2$ ,  $2^2$ ,  $3^2$ ,  $4^2$ ,  $5^2$ ,  $6^2$ ,  $7^2$ ,  $8^2$ ,  $9^2$ , and  $10^2$ .

1	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100

Evaluate the following expressions.

$$(5^2 - 2^2) \div (3 + 4) \text{ _____}$$

$$(3 + 1)^2 - (4 + 6) \text{ _____}$$

$$[10^2 \times (1 + 4)] \div 2 \text{ _____}$$

$$\frac{1}{2} \times 2^2 + \frac{1}{2} \times 4^2 \text{ _____}$$

$$[(10^2 - 50) - (40 + 8)]^2 \text{ _____}$$

$$[(5^2 - 4^2) - (5 - 3)^2] + 1^2 \text{ _____}$$

Name: \_\_\_\_\_

Date: \_\_\_\_\_

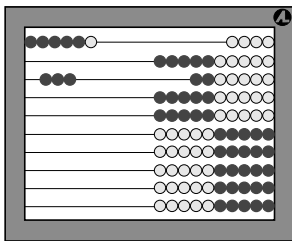
**Warm-Up**

Multiply the numbers given. Use check numbers to check your work if you like.

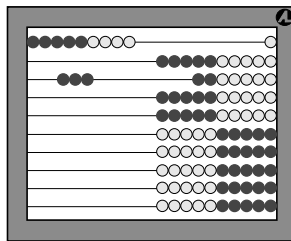
		0	.	8	5	( )
		×	2	4	( )	
						( )

				3	8	( )		
			×	0	.	4	9	( )
								( )

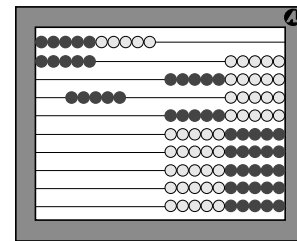
Write the equations shown on the abacuses. Each bead on the abacus represents 0.1.



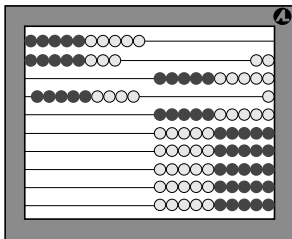
$\frac{0.6}{0.3} = \underline{\quad}$



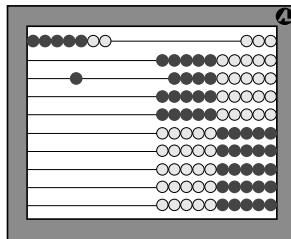
$\underline{\quad} = \underline{\quad}$



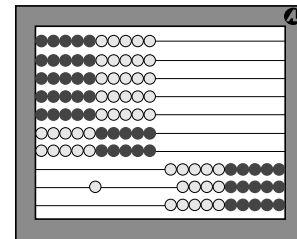
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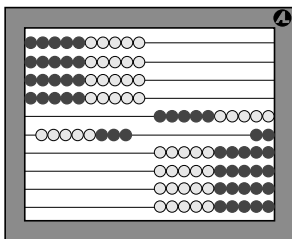
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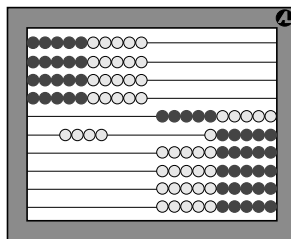
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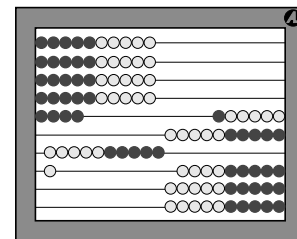
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$\underline{\quad} = \underline{\quad}$



$\underline{\quad} = \underline{\quad}$



$\underline{\quad} = \underline{\quad}$

If each bead in the abacuses above suddenly explodes becoming ten times greater, what happens to your answers? \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. For each figure, measure the length of the side of squares in centimeters. Then complete the table.

Figure 1.

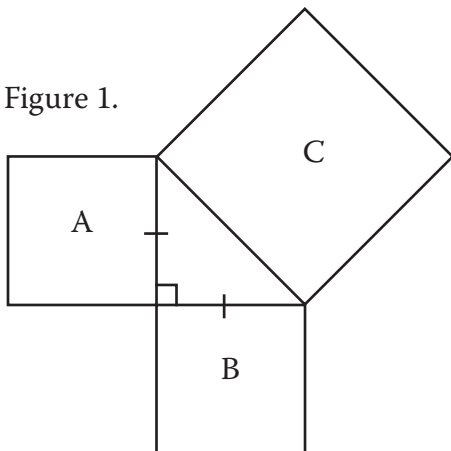


Figure 2.

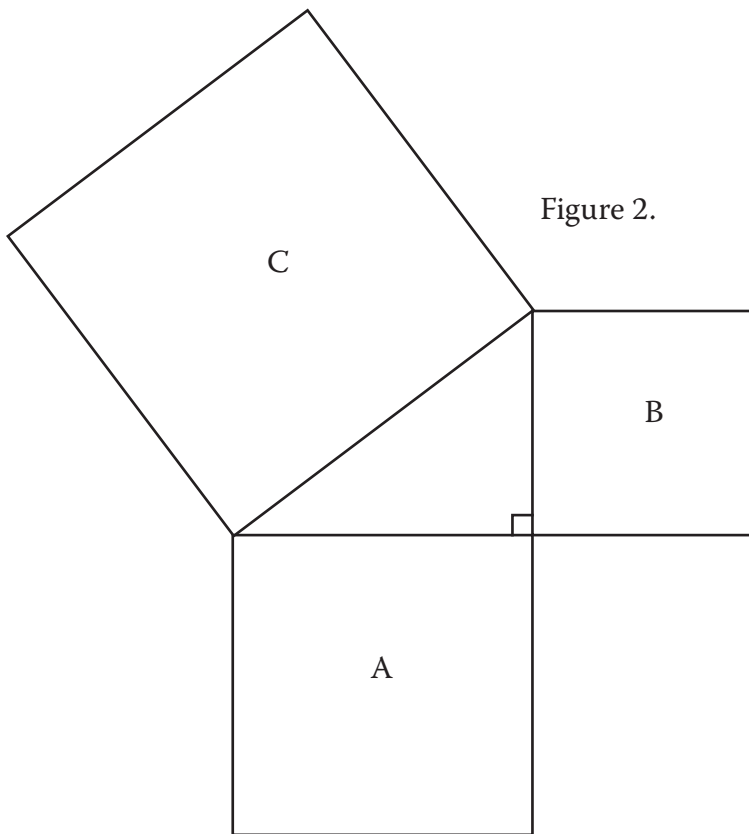


	Figure 1	Figure 2
Side of A		
Side of B		
Side of C	2.83 cm	
Area of A		
Area of B		
Area of C		

In each figure, how does the area of the two smaller squares compare to the area of the larger square?

\_\_\_\_\_

2. Measure the sides of squares A and B and calculate the side of C. Use millimeters for Figure 3 and hundredths of a centimeter for Figure 4. Fill in the table. Use a calculator to find square roots.

Figure 3.

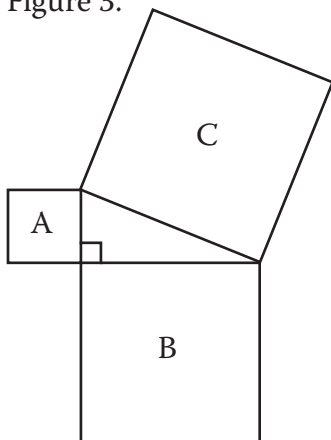


Figure 4.

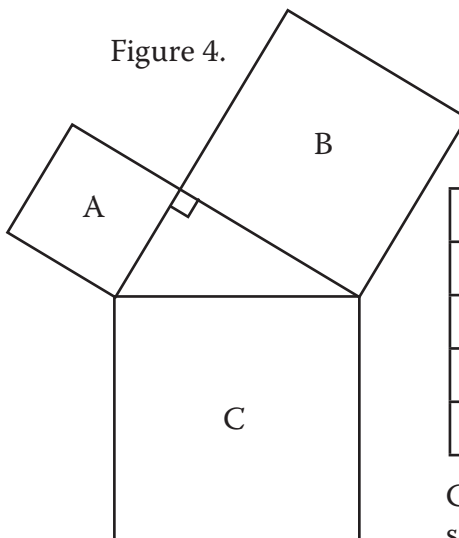


	Figure 3	Figure 4
Area of A		
Area of B		
Area of C		
Side of C		

Compare your calculations for side C by measuring the figures.



Name: \_\_\_\_\_

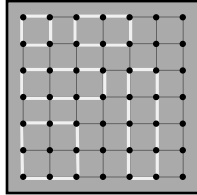
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A square formed by four pegs on the geoboard is 1 unit of area.

*Boundary points* are pegs on the perimeter of the figure. A *boundary pair* is two boundary points.

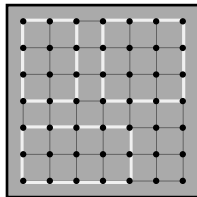
Fill in the table for each figure below.

Figures 1 to 5.



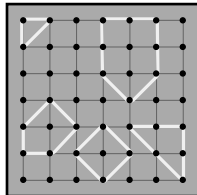
Area in Units	Number of Pegs	
	Boundary Pairs	Inside
1	2	

Figures 6 to 8.



Area in Units	Number of Pegs	
	Boundary Pairs	Inside

Figures 9 to 13.



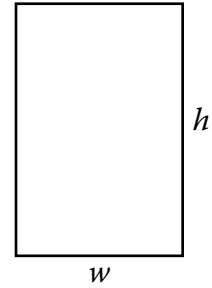
Area in Units	Number of Pegs	
	Boundary Pairs - 1	Inside

Name: \_\_\_\_\_

Date: \_\_\_\_\_

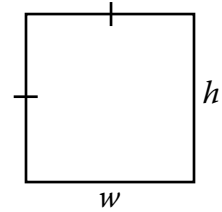
1. Are the formulas for finding the perimeter,  $P$ , and area,  $A$ , of a rectangle all correct? Write yes or no.

- \_\_\_\_\_  $P = w + h + w + h$
- \_\_\_\_\_  $P = 2w + 2h$
- \_\_\_\_\_  $P = w \times h$
- \_\_\_\_\_  $P = 2(w + h)$
- \_\_\_\_\_  $A = 2(w \cdot h)$
- \_\_\_\_\_  $A = w \times h$



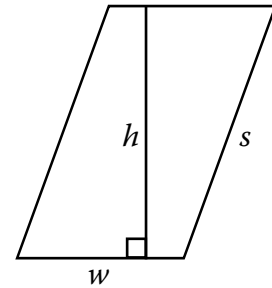
2. Are the formulas for finding the perimeter,  $P$ , and area,  $A$ , of a square all correct? Write yes or no.

- \_\_\_\_\_  $P = w + h + w + h$
- \_\_\_\_\_  $P = 2w + 2h$
- \_\_\_\_\_  $P = 2(w + h)$
- \_\_\_\_\_  $P = 4w$
- \_\_\_\_\_  $A = 2 \times (w + h)$
- \_\_\_\_\_  $A = w \cdot h$
- \_\_\_\_\_  $A = w^2$
- \_\_\_\_\_  $A = h^2$



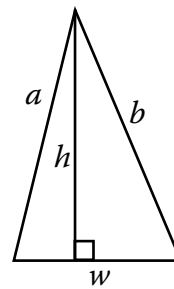
3. Are the formulas for finding the perimeter,  $P$ , and area,  $A$ , of a parallelogram all correct? Write yes or no.

- \_\_\_\_\_  $P = 2w + 2h$
- \_\_\_\_\_  $P = w \times s$
- \_\_\_\_\_  $P = 2(w + s)$
- \_\_\_\_\_  $A = 2(w \times h)$
- \_\_\_\_\_  $A = ws$
- \_\_\_\_\_  $A = wh$
- \_\_\_\_\_  $A = w \cdot h$



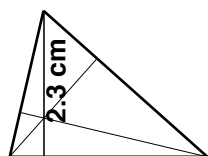
4. Are the formulas for finding the perimeter,  $P$ , and area,  $A$ , of a triangle all correct? Write yes or no.

- \_\_\_\_\_  $P = w + b + h$
- \_\_\_\_\_  $P = 2w + 2h$
- \_\_\_\_\_  $P = w + b + a$
- \_\_\_\_\_  $A = w + h$
- \_\_\_\_\_  $A = \frac{1}{2}(w \times h)$
- \_\_\_\_\_  $A = \frac{1}{2} \times (w + h)$
- \_\_\_\_\_  $A = \frac{1}{2}wh$
- \_\_\_\_\_  $A = \frac{wh}{2}$



## ACTIVITIES FOR TEACHING CONTINUED:

**Worksheet 55, Problem 1.** Tell the children to read the instructions for the first problem. Tell them the heights are drawn for them, but they need to match the correct heights and widths. The solutions are below.

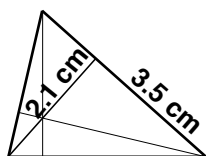


3.2 cm

$$A = \frac{1}{2}wh$$

$$A = \frac{1}{2} \times 3.2 \times 2.3$$

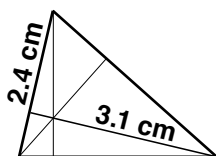
$$A = 3.7 \text{ cm}^2$$



$$A = \frac{1}{2}wh$$

$$A = \frac{1}{2} \times 3.5 \times 2.1$$

$$A = 3.7 \text{ cm}^2$$

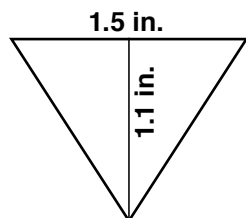


$$A = \frac{1}{2}wh$$

$$A = \frac{1}{2} \times 2.4 \times 3.0$$

$$A = 3.7 \text{ cm}^2$$

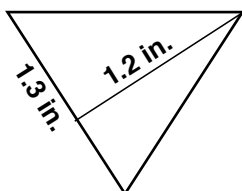
**Problem 2.** Tell the children to complete the second problem on the worksheet. Tell them to use the triangle to draw the perpendicular line. The solutions are below.



$$A = \frac{1}{2}wh$$

$$A = \frac{1}{2} \times 1.5 \times 1.1$$

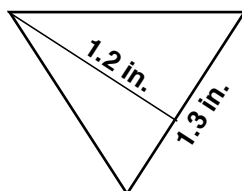
$$A = 0.83 \text{ in}^2$$



$$A = \frac{1}{2}wh$$

$$A = \frac{1}{2} \times 1.3 \times 1.2$$

$$A = 0.78 \text{ in}^2$$



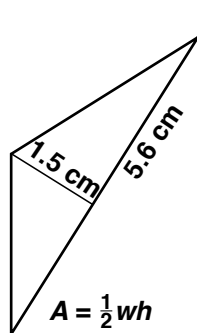
$$A = \frac{1}{2}wh$$

$$A = \frac{1}{2} \times 1.3 \times 1.2$$

$$A = 0.78 \text{ in}^2$$

Ask: What kind of a triangle is this? [isosceles acute triangle] Why do you think the answers are less accurate compared to Problem 1? [Rounding and the tenths of an inch are larger than the tenths of a centimeter.]

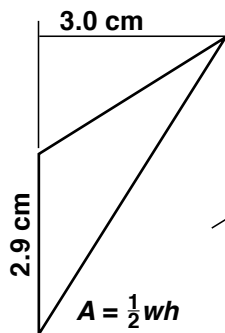
**Problem 3.** Tell the children to complete the third problem on the worksheet. Tell them that some of the sides of obtuse triangles need to be extended, which is done for them. The solutions are below.



$$A = \frac{1}{2}wh$$

$$A = \frac{1}{2} \times 5.6 \times 1.5$$

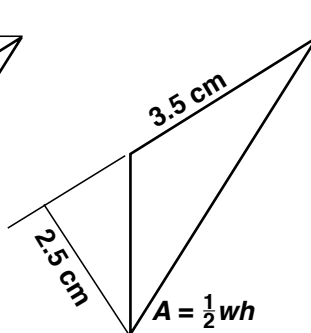
$$A = 4.20 \text{ cm}^2$$



$$A = \frac{1}{2}wh$$

$$A = \frac{1}{2} \times 2.9 \times 3.0$$

$$A = 4.35 \text{ cm}^2$$



$$A = \frac{1}{2}wh$$

$$A = \frac{1}{2} \times 3.5 \times 2.5$$

$$A = 4.38 \text{ cm}^2$$

**In conclusion.** Ask: What do you call a perpendicular line from a side of a triangle to the opposite vertex? [height] How many heights are in a triangle? [three]

## EXPLANATIONS CONTINUED:

Answers may vary slightly.

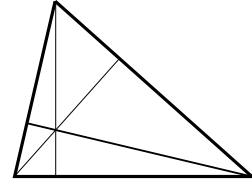
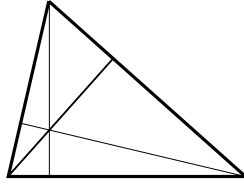
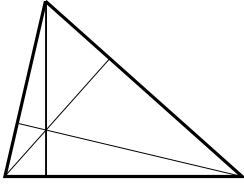
The calculated areas are not identical because the measurements are not exact. The more accurate the measurements, the closer the calculated areas will be.

If there is additional time following this lesson, play the Find the Products game, found in *Math Card Games* book, P33.

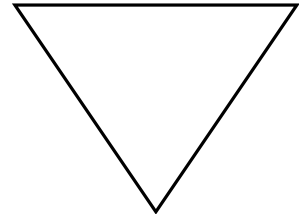
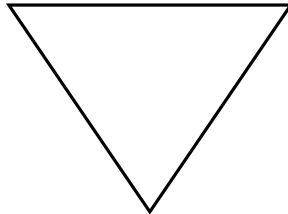
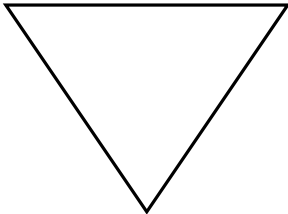
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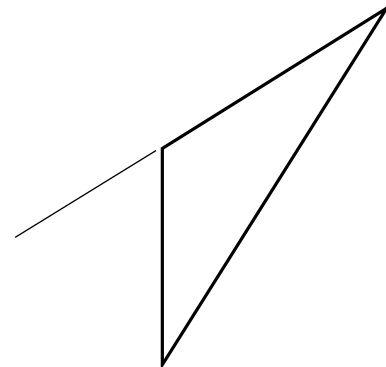
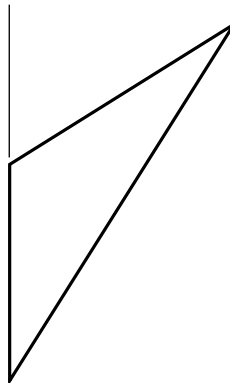
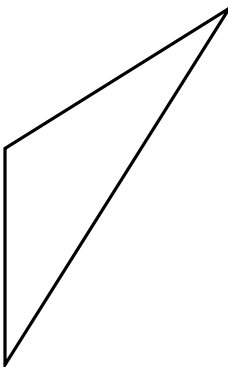
1. Find the area of the triangle below in three different ways. Measure to the nearest tenth of a centimeter.



2. Find the area of the triangle below in three different ways. Measure to the nearest tenth of an inch. Calculate your answer to the nearest hundredths.



3. Find the area of the triangle below in three different ways. Measure to the nearest tenth of a centimeter. Calculate your answer to the nearest hundredths.

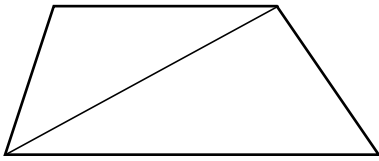


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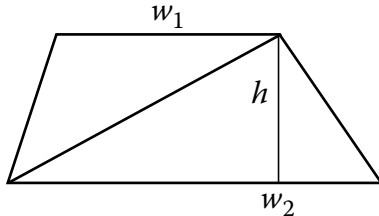
Date: \_\_\_\_\_

1. Find the area of the trapezoid by breaking it into two triangles as shown below. Use a tangram to draw the height for both triangles using the horizontal lines as the base.

A. Measure in centimeters.

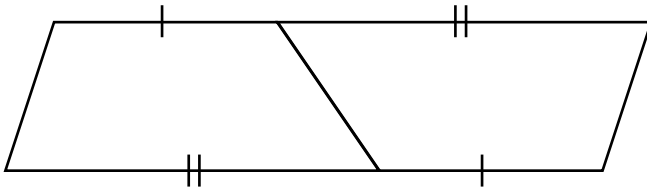


B. Write a formula for the area.

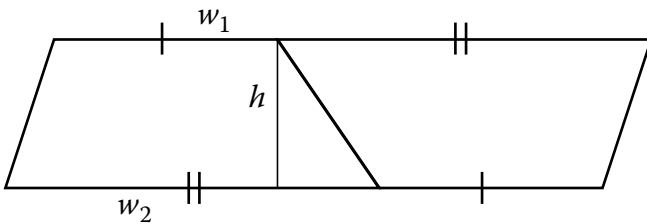


2. Find the area of the parallelogram. Then find the area of one trapezoid.

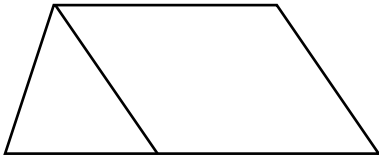
A. Measure in centimeters.



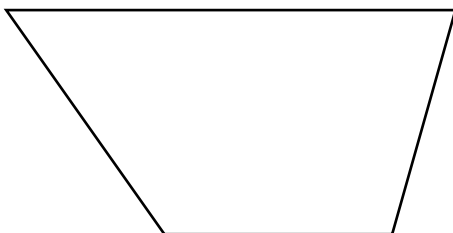
B. Write the formulas for the areas.



3. Find the area of the trapezoid in square centimeters by adding the areas of the parallelogram and triangle.



4. Find the area of the trapezoid in square centimeters using any method.



Name: \_\_\_\_\_

Date: \_\_\_\_\_

**INFORMATION: The definition of an inch is: 1 in. = 2.54 cm.****Conversions you may need: 1 km (kilometer) = 1000 m 1 mi = 5280 ft 1 yd = 36 in.**

Use dimensional analysis to solve the problems. Do not round. You may use a calculator.

1. Find how many centimeters are in a foot.

\_\_\_\_\_ → \_\_\_\_\_ → \_\_\_\_\_

$$1 \text{ ft} = 1 \text{ ft} \times \frac{\text{_____}}{\text{ft}} \times \frac{\text{_____}}{\text{in.}} = \text{_____} \text{ Does your answer agree with a ruler? } \text{_____}$$

2. Find how many centimeters are in a yard.

\_\_\_\_\_ → ft → \_\_\_\_\_ → \_\_\_\_\_

$$1 \text{ yd} = \text{_____} \times \text{_____} \times \text{_____} \times \text{_____} = \text{_____}$$

Does your answer agree with a yardstick? \_\_\_\_\_

3. Find how many kilometers are in a mile.

\_\_\_\_\_ → ft → \_\_\_\_\_ → cm → m → km

$$1 \text{ mi} = \text{_____} \times \text{_____} \times \text{_____} \times \text{_____} \times \text{_____} \times \text{_____} = \text{_____}$$

Which is longer, a kilometer or a mile? \_\_\_\_\_

Round your answer to one decimal point. \_\_\_\_\_

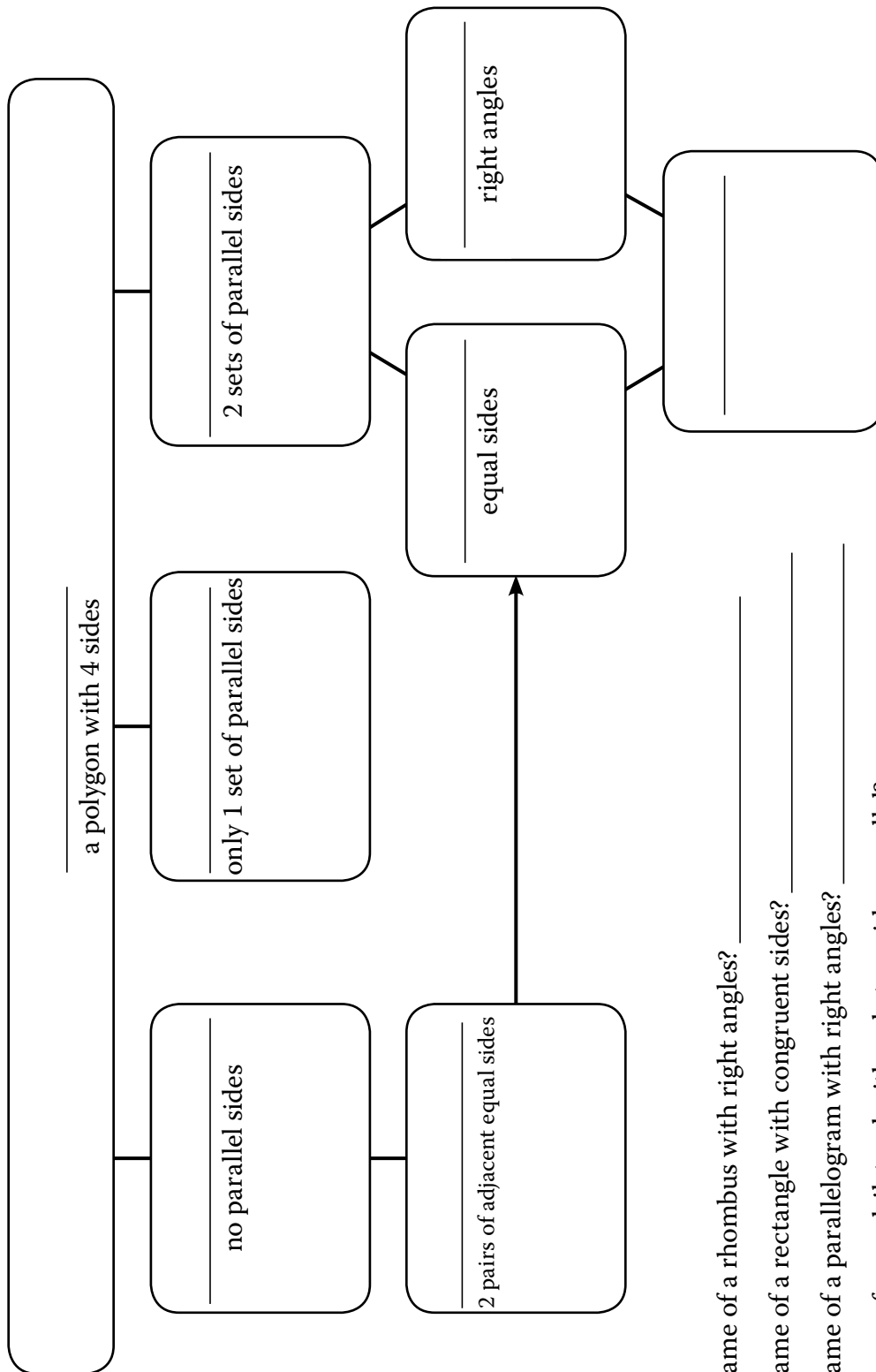
4. How many miles are in a kilometer? Use your unrounded answer from Problem 3.

Round to two decimal places.

\_\_\_\_\_ → \_\_\_\_\_

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Write the following terms in the chart: no name, trapezoid, parallelogram, rhombus, kite, quadrilateral, square, and rectangle. Use your drawing tools to draw a sample figure in each of the six boxes. Then answer the questions below.



What is the name of a rhombus with right angles? \_\_\_\_\_

What is the name of a rectangle with congruent sides? \_\_\_\_\_

What is the name of a parallelogram with right angles? \_\_\_\_\_

What is the name of a quadrilateral with only two sides parallel? \_\_\_\_\_

What three quadrilaterals can be made with these lines:  $\parallel \parallel \parallel$  \_\_\_\_\_

**MULTIPLICATION TABLE**

1	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100