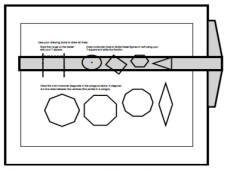


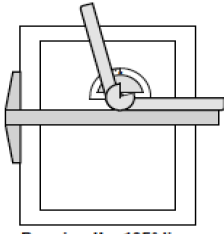
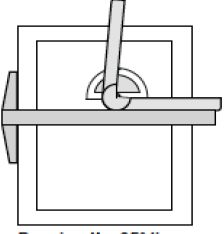
Most recent update: February 1, 2025

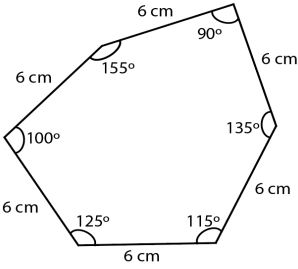
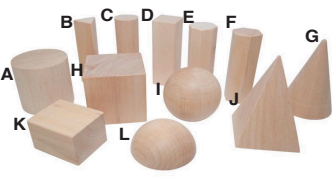
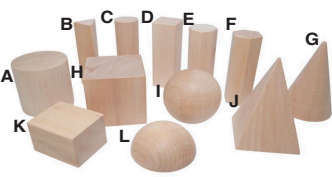
RightStart™ Mathematics

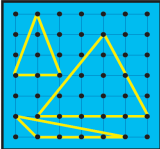
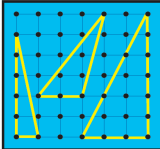
Corrections and Updates for Grade 4 Lessons and Worksheets, second edition

LESSON/WORKSHEET	CHANGE DATE	CORRECTION OR UPDATE																
Lesson 6	05/20/2021	On the second page, right above the short multiplication table, the answer to 8×9 should be "go to row 8 and down to row 9" not "go to row 6 and down to row 8."																
Lesson 8	04/18/2018	The Quotient and Remainder game instructions should read: Place the dividend card, the multiplication card, first in the row, as shown below."																
Lesson 19 Worksheet 7	12/01/2020	The last problem on the worksheet should read "Write any 3-digit number with no two numbers being the same. "																
Lesson 19	12/01/2020	On the second page, an explanation was added across from the Worksheet 7 paragraph: If the first and last numbers of the 3-digit number are sequential, such as 493, the difference will be 99. Assume a 0 precedes the 99, giving the reverse number as 990, then the final sum will be 1089. Peter, age 9, found that if the first and third number are the same, such as 181, or if all three digits are the same, such as 333, the final sum is another number!																
Lesson 26	11/18/2016	At the bottom of the page, it reads: "Repeat for: $10,380 - 8267$ ". It should read: "Repeat for: $10,280 - 8367$ "																
Lesson 28 Worksheet 15-A	01/03/2019	The magic square on the bottom of the worksheet is incorrect. See attached PDF . Correct answers are shown here. <div style="text-align: right; margin-top: 10px;"> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td>14</td><td>5</td><td>1</td><td>7</td></tr> <tr><td>-1</td><td>7</td><td>8</td><td>13</td></tr> <tr><td>6</td><td>4</td><td>8</td><td>9</td></tr> <tr><td>8</td><td>11</td><td>10</td><td>-2</td></tr> </table> </div>	14	5	1	7	-1	7	8	13	6	4	8	9	8	11	10	-2
14	5	1	7															
-1	7	8	13															
6	4	8	9															
8	11	10	-2															
Lesson 36	04/18/2018	The Quotient and Remainder game instructions should read: Place the dividend card, the multiplication card, first in the row, as shown below."																
Lesson 38 Classroom version only	07/31/2017	On the second page, the second drawing board is depicted to the right of the work, rather than under the worksheet's information. It should look as shown here. <div style="text-align: right; margin-top: 10px;">  <p style="font-size: small; text-align: center;">T-square position for left-handed user.</p> </div>																
Lesson 55	11/18/2016	For the second Warm-Up, $6374 - 4736$ is 1638 , not 1636. The check numbers are correct.																

Lesson 56	03/29/2017	The game assigned for the day is F22.1, Corner with Eighths. Older fifth edition books do not have this game. Games are found on the pdf attached at the bottom of this document. This also will affect lessons 57, 71, 73, 74, 76, 77, 78, and 138.
Lesson 61	06/02/2022	On the second page, under Using a calculator to find prime numbers, 7 and 11 are not factors , rather than not multiples, of 89.
Lesson 62	02/09/2021	At the bottom of the first page, it asks what is the next prime number. [5] Then it asks what do you cross out? The answer should be [15, 25, 35 . . . , 95] , not [5, 10, . . . , 100]
Lesson 65	01/06/2025	In the explanation on the first page, the second paragraph should read "Using $52 \div 3$ as an example, $52 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3$ leaves a remainder of 1, " not "Using $52 \div 3$ as an example, $52 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 = 52$ with a remainder of 1."
Lesson 68	04/17/2017	On the second page, the third and fourth answers for the Worksheet 42 have the "small" numbers in the wrong place; are too far to the left. It should look like this: <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: right;"> $\begin{array}{r} 856 \text{ (1)} \\ 5 \overline{)4280} \text{ (5)} \end{array}$ </div> <div style="text-align: right;"> $\begin{array}{r} \text{(1)} \\ 856 \text{ r3} \\ 5 \overline{)4283} \text{ (8)} \end{array}$ </div> </div>
Lesson 68	01/06/2024	On the second page, at the end of the third paragraph, the question "What is the quotient" is posed. The answer should be [202 r1] , not [201 r1].
Lesson 69	01/04/2021	On the second page, the check number for 240 in the second problem should be (6) , not (0).
Lesson 70	01/03/2019	On the second page, the factors of 20 should be 1, 2, 4, 5, 10, and 20 , not 10 and 2.
Lesson 78	03/10/2017	Answers for Worksheet 51, third answer on the top row, should be $63 - \mathbf{47} / 100$ and $63.\mathbf{47}$, not $63 - 49 / 100$ and 63.49 .
Lesson 80	03/10/2017	the Warm-Up multivide answer, there are two errors in the middle of the calculations. It should be as follows: <div style="text-align: right;"> $\begin{array}{r} 5 \text{ 040 (0)} \\ \times 54 \text{ (0)} \\ \hline 20 \text{ 160} \\ 252 \text{ 000} \\ \hline 272 \text{ 160 (0)} \\ \times 16 \text{ (8)} \\ \hline 1 \text{ 632 960} \\ \hline 2 \text{ 721 600} \\ \hline 4 \text{ 354 560 (0)} \end{array}$ </div>
Lesson 82	03/10/2017 12/28/2017	the Warm-Up multivide answer, there is an error in the middle of the calculations. It should be as follows: <div style="text-align: right;"> $\begin{array}{r} 314 \text{ 496 (0)} \\ \times 15 \text{ (6)} \\ \hline 1 \text{ 572 480} \\ \hline 3 \text{ 144 960} \\ \hline 4 \text{ 717 440 (0)} \end{array}$ </div> <p>Also, the bottom of the first page has been changed to read as follows: Ask: What does the M+ key do? [adds to memory] What do you think the M- key does? [subtracts from memory] Change the problem to: $6 \times 9 - 5 \times 8 = [14]$ and ask: How can you do it now? [Use the M- key instead of the M+ key to subtract the second expression.]</p>

Lesson 83	08/08/2023	For the Warm-Ups multivide, the check digit for 60 in 2352×60 should be (6), $1680 \div 5$ should be (6), the check digit for $336 \div 4$ should be (3), the check digit for $84 \div 3$ should be (3), and the check digit for $28 \div 2$ should be (1).
Lesson 84	08/19/2016	For the Warm-Ups multivide, the check digit for $1920 \div 5$ should be (3), the check digit for $384 \div 4$ should be (6), the check digit for $96 \div 3$ should be (6), and the check digit for $32 \div 2$ should be (5).
Lesson 85	06/27/2023	On the second page under the second heading, A Mile, a sentence was added at the end of the first paragraph: Ask: How many steps are needed to walk a mile? [2000 steps] This helps connect the upcoming question connecting 10,000 steps and 5 miles.
Lesson 87	02/10/2023	In the bullet points under the gas prices, the fourth bullet should say "The 9/10 means 9/10 of one cent, which is also nine thousandth of a dollar" rather than one thousandths of a dollar. The fifth bullet point should say "...and are also thousandths of a dollar," not thousands of a dollar.
Lesson 89	08/19/2016	For the Warm-Ups multivide, the check digit for $2280 \div 5$ should be (3).
Lesson 92	03/10/2017	Under the Thirds and sixths in percents heading, second paragraph, it should read Say: Two thirds is $66\frac{2}{3}\%$, not one sixth is $66\frac{2}{3}\%$.
Lesson 95	08/19/2016	For the Warm-Ups multivide, the partial answer for $90,720 \times 6$ (of 96) should be 544,320 , not 444,320.
Lesson 97 Worksheet 69	03/10/2017	The third question should read "What percentage of the tangrams are triangles? " not "isosceles triangles". PDF is attached.
Lesson 103 Worksheet 75	10/10/2023	Questions 3 and 4 have been changed to: "Which penagons above have all sides/angles congruent?" not "Which pentagons above have congruent sides/angles?" PDF is attached.
Lesson 104	05/18/2017	The graphics on second page been changed shown here. <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p style="text-align: center;"> Drawing the 105° line on the protractor. Drawing the 85° line on the protractor. </p>
Lesson 104	02/21/2023	The first explanation should read "A 3 cm, 4 cm, and 5 cm triangle would also be a right triangle" not an acute triangle.
Lesson 107	06/27/2023	The central angle for the second problem on the worksheet is 60° .

Lesson 108	07/06/2024	<p>An explanation has been added to address the true/false statement "A hexagon with congruent sides always a regular polygon" follows: A regular hexagon must have congruent angles as well as congruent sides. See the hexagon below with congruent sides but no congruent angles.</p>																																									
Lesson 109	05/19/2017	<p>The answer to the first problem in the warm up should be 35,564, not 35,561.</p>																																									
Lesson 111	Worksheet 83	02/01/2025	<p>In the first table, the last row should have 1760 × n faintly written, not 1760 – n, in the second column.</p>																																								
Lesson 115	03/10/2017	<p>Regarding the picture of the geometry solids, the manufacturer changed the solids and the triangular prism is now a rectangular prism. The new graphic is shown here.</p>	 <ul style="list-style-type: none"> A Large cylinder B Triangular prism C Small cylinder D Square prism E Octagonal prism F Hexagonal prism G Cone H Cube I Sphere J Square pyramid K Rectangular prism L Hemisphere 																																								
Lesson 115	12/14/2019	<p>The sample line plot for a leap year, A note was added, "All leap years will have three months that start on the same day of the week because January, April, and July start on the same day." The most common day will depend on what calendar year is being considered.</p>	<p style="text-align: center;">First Day of the Months in a Leap Year</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>X</td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>S</td> <td>M</td> <td>T</td> <td>W</td> <td>Th</td> <td>F</td> <td>S</td> <td></td> </tr> </table>					X				X		X	X	X	X	X	X	X	X	X	X	X	X	X	X									S	M	T	W	Th	F	S	
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Lesson 115	06/27/2023	<p>The graph for Problem 3 should have another tickmark after the 3 with the "X" above that mark as the measurement is 3-1/4, not 3-1/8. No mark should be at the 3-1/8 mark on the line.</p>																																									
Lesson 115	Worksheet 87	10/12/2023	<p>The last question has been changed to: What is the difference in length between the most frequent dimension and the next most frequent dimension?</p>																																								
Lesson 124	Worksheet 96	03/10/2017	<p>Problem 3 should read "The diameter of the base is 4 units" not 2 units. PDF is attached.</p>																																								
Lesson 125	03/10/2017	<p>Regarding the picture of the geometry solids, the manufacturer changed the solids and the triangular prism is now a rectangular prism. The new graphic is shown here.</p>	 <ul style="list-style-type: none"> A Large cylinder B Triangular prism C Small cylinder D Square prism E Octagonal prism F Hexagonal prism G Cone H Cube I Sphere J Square pyramid K Rectangular prism L Hemisphere 																																								
Lesson 125	02/10/2023	<p>In the solutions for the warm-up, the check number of 56 should be (2), not (7).</p>																																									

Lesson 128	01/03/2019	The fourth paragraph on the second page has changed to read "Tell him to watch while you show him a procedure for finding the area. Make the 2×3 rectangle on the geoboard. Then touch any two boundary pegs with your non-writing hand. Count the uncovered boundary pairs then add the inside pegs to find the area . See the figures below."																																																
Lesson 130	12/28/2017	<p>The order of the columns in the two tables are changed to list $b, h, b \times h$, then Area.</p> <table border="1" data-bbox="1149 422 1455 646"> <thead> <tr> <th>b</th> <th>h</th> <th>$b \times h$</th> <th>Area</th> </tr> </thead> <tbody> <tr> <td>4</td> <td>1</td> <td>4</td> <td>2</td> </tr> <tr> <td>2</td> <td>3</td> <td>6</td> <td>3</td> </tr> <tr> <td>5</td> <td>4</td> <td>20</td> <td>10</td> </tr> <tr> <td>1</td> <td>5</td> <td>5</td> <td>$2\frac{1}{2}$</td> </tr> <tr> <td>2</td> <td>4</td> <td>8</td> <td>4</td> </tr> <tr> <td>3</td> <td>6</td> <td>18</td> <td>9</td> </tr> </tbody> </table> <table border="1" data-bbox="1149 659 1455 821"> <thead> <tr> <th>b</th> <th>h</th> <th>$b \times h$</th> <th>Area</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>2</td> <td>6</td> <td>3</td> </tr> <tr> <td>2</td> <td>3</td> <td>6</td> <td>3</td> </tr> <tr> <td>5</td> <td>3</td> <td>15</td> <td>$7\frac{1}{2}$</td> </tr> <tr> <td>3</td> <td>1</td> <td>3</td> <td>$1\frac{1}{2}$</td> </tr> </tbody> </table>	b	h	$b \times h$	Area	4	1	4	2	2	3	6	3	5	4	20	10	1	5	5	$2\frac{1}{2}$	2	4	8	4	3	6	18	9	b	h	$b \times h$	Area	3	2	6	3	2	3	6	3	5	3	15	$7\frac{1}{2}$	3	1	3	$1\frac{1}{2}$
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3	1	3	$1\frac{1}{2}$																																															
Lesson 130	03/21/2024	<p>The order of the first three rows has been changed to match the worksheet graphics.</p> <div style="display: flex; justify-content: space-around;">   </div> <p style="text-align: center;">Problems 11 to 16.</p> <table border="1" data-bbox="1125 1052 1409 1262"> <thead> <tr> <th>b</th> <th>h</th> <th>$b \times h$</th> <th>Area</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>3</td> <td>6</td> <td>3</td> </tr> <tr> <td>5</td> <td>4</td> <td>20</td> <td>10</td> </tr> <tr> <td>4</td> <td>1</td> <td>4</td> <td>2</td> </tr> <tr> <td>1</td> <td>5</td> <td>5</td> <td>$2\frac{1}{2}$</td> </tr> <tr> <td>2</td> <td>4</td> <td>8</td> <td>4</td> </tr> <tr> <td>3</td> <td>6</td> <td>18</td> <td>9</td> </tr> </tbody> </table> <p style="text-align: center;">How is the area of a triangle related to $b \times h$? The area of half of $b \times h$.</p>	b	h	$b \times h$	Area	2	3	6	3	5	4	20	10	4	1	4	2	1	5	5	$2\frac{1}{2}$	2	4	8	4	3	6	18	9																				
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Lesson 132	12/28/2017	On the top of the second page, the fourth line's area of the parallelogram should be 4 , not 6.																																																
Lesson 136	04/18/2018	The Quotient and Remainder game instructions should read: Place the dividend card, the multiplication card, first in the row, as shown below."																																																
Lesson 140 Worksheet 109	05/19/2017	The last question, number 159, should read " Which is longer, 3 feet or 1 meter? ", not 3 yards or 1 meter. PDF of the worksheet is attached. Correct answer is 1 meter .																																																

LESSON 28: REVIEW AND GAMES 2

OBJECTIVES:

1. To review recent topics
2. To develop skills through playing math card games

MATERIALS:

1. Worksheet 15-A or 15-B, Review 2
2. *Math Card Games* book, P34
3. Short Multiplication Table, Appendix p.1, if needed

ACTIVITIES FOR TEACHING:

Worksheet 15-A. Give the children the worksheet. Tell them to listen to the problems and write the answers. Read each problem twice.

$$43 \times 10 \qquad 149 + 37 \qquad 70 \times 8$$

Tell them to complete the worksheet. Solutions are below.

<p>Write only the answers.</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;"><u> 430 </u></td></tr> <tr><td style="text-align: center;"><u> 186 </u></td></tr> <tr><td style="text-align: center;"><u> 560 </u></td></tr> </table> <p>Add or subtract. Use check numbers.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">9575 (8)</td> <td style="text-align: center;">4763 (2)</td> <td style="text-align: center;">9515 (2)</td> <td style="text-align: center;">4012 (7)</td> </tr> <tr> <td style="text-align: center;">+ 5592 (3)</td> <td style="text-align: center;">+ 5251 (4)</td> <td style="text-align: center;">- 5592 (3)</td> <td style="text-align: center;">- 1802 (2)</td> </tr> <tr> <td style="text-align: center;">15,167 (2)</td> <td style="text-align: center;">10,014 (6)</td> <td style="text-align: center;">3923 (8)</td> <td style="text-align: center;">2210 (5)</td> </tr> </table> <p>Utah's population is two <u>million</u> nine hundred <u>thousand</u> eight hundred seventy-two.</p> <p>Underline the period names. Write the number using digits and commas. <u> 2,900,872 </u></p> <p>Fill in the blanks.</p> <table style="width: 100%;"> <tr><td>$3 \times \underline{8} = 24$</td></tr> <tr><td>$8 \times \underline{8} = 64$</td></tr> <tr><td>$7 \times \underline{2} = 14$</td></tr> <tr><td>$\underline{4} \times 11 = 44$</td></tr> <tr><td>$\underline{6} \times 9 = 54$</td></tr> <tr><td>$6 \times \underline{4} = 24$</td></tr> <tr><td>$2 \times \underline{7} = 14$</td></tr> </table> <p>Draw lines to match the expressions.</p> <table style="width: 100%;"> <tr><td>4×4</td><td>16×2</td></tr> <tr><td>8×5</td><td>$6 \times 5 + 6 \times 2$</td></tr> <tr><td>8×4</td><td>5×5</td></tr> <tr><td>$20 + 5$</td><td>8×2</td></tr> <tr><td>9×7</td><td>$6 \times 7 - 2$</td></tr> <tr><td>6×7</td><td>$50 - 1$</td></tr> <tr><td>$32 \div 4$</td><td>$9 \times 6 + 2$</td></tr> <tr><td>7×7</td><td>$70 - 7$</td></tr> <tr><td>8×7</td><td>$2 \times 2 \times 2$</td></tr> </table>	<u> 430 </u>	<u> 186 </u>	<u> 560 </u>	9575 (8)	4763 (2)	9515 (2)	4012 (7)	+ 5592 (3)	+ 5251 (4)	- 5592 (3)	- 1802 (2)	15,167 (2)	10,014 (6)	3923 (8)	2210 (5)	$3 \times \underline{8} = 24$	$8 \times \underline{8} = 64$	$7 \times \underline{2} = 14$	$\underline{4} \times 11 = 44$	$\underline{6} \times 9 = 54$	$6 \times \underline{4} = 24$	$2 \times \underline{7} = 14$	4×4	16×2	8×5	$6 \times 5 + 6 \times 2$	8×4	5×5	$20 + 5$	8×2	9×7	$6 \times 7 - 2$	6×7	$50 - 1$	$32 \div 4$	$9 \times 6 + 2$	7×7	$70 - 7$	8×7	$2 \times 2 \times 2$	<p>Write the answers.</p> <table style="width: 100%;"> <tr><td>$582 + 69 = \underline{651}$</td></tr> <tr><td>$87 + \underline{113} = 200$</td></tr> <tr><td>$(6 \div 3) + (6 \div 2) = \underline{5}$</td></tr> </table> <p>Solve the problem.</p> <p>Kendra wants to walk her dog for an hour. She has 25 minutes left to walk. How long has she walked so far?</p> <p style="text-align: center;">w = walked so far</p> <p style="text-align: center;">w + 25 = 60</p> <p style="text-align: center;">w = 35 minutes</p> <p>Complete the magic square.</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>14</td><td>5</td><td>1</td><td>7</td></tr> <tr><td>-1</td><td>7</td><td>8</td><td>13</td></tr> <tr><td>6</td><td>4</td><td>8</td><td>9</td></tr> <tr><td>8</td><td>11</td><td>10</td><td>-2</td></tr> </table>	$582 + 69 = \underline{651}$	$87 + \underline{113} = 200$	$(6 \div 3) + (6 \div 2) = \underline{5}$	14	5	1	7	-1	7	8	13	6	4	8	9	8	11	10	-2
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$\underline{4} \times 11 = 44$																																																												
$\underline{6} \times 9 = 54$																																																												
$6 \times \underline{4} = 24$																																																												
$2 \times \underline{7} = 14$																																																												
4×4	16×2																																																											
8×5	$6 \times 5 + 6 \times 2$																																																											
8×4	5×5																																																											
$20 + 5$	8×2																																																											
9×7	$6 \times 7 - 2$																																																											
6×7	$50 - 1$																																																											
$32 \div 4$	$9 \times 6 + 2$																																																											
7×7	$70 - 7$																																																											
8×7	$2 \times 2 \times 2$																																																											
$582 + 69 = \underline{651}$																																																												
$87 + \underline{113} = 200$																																																												
$(6 \div 3) + (6 \div 2) = \underline{5}$																																																												
14	5	1	7																																																									
-1	7	8	13																																																									
6	4	8	9																																																									
8	11	10	-2																																																									

EXPLANATIONS:

The Review worksheets each have two versions. The second version can be used in various ways: as a quiz, as a test, as a check after tutoring, as a placement for a child entering late, and so forth.

Ask the children to correct any errors in class.

See page iii, number 17 of "Some General Thoughts on Teaching Mathematics," for additional information.

Name: _____

Date: _____

Write only the answers.

Write the answers.

$582 + 69 = \underline{\hspace{2cm}}$

$87 + \underline{\hspace{2cm}} = 200$

$(6 \div 3) + (6 \div 2) = \underline{\hspace{2cm}}$

Add or subtract. Use check numbers.

$9575 \quad (\quad)$
 $+ 5592 \quad (\quad)$

$4763 \quad (\quad)$
 $+ 5251 \quad (\quad)$

$9515 \quad (\quad)$
 $- 5592 \quad (\quad)$

$4012 \quad (\quad)$
 $- 1802 \quad (\quad)$

Utah's population is two million nine hundred thousand eight hundred seventy-two. Underline the period names. Write the number using digits and commas. _____

Fill in the blanks.

$3 \times \underline{\hspace{1cm}} = 24$

$8 \times \underline{\hspace{1cm}} = 64$

$7 \times \underline{\hspace{1cm}} = 14$

$\underline{\hspace{1cm}} \times 11 = 44$

$\underline{\hspace{1cm}} \times 9 = 54$

$6 \times \underline{\hspace{1cm}} = 24$

$2 \times \underline{\hspace{1cm}} = 14$

Solve the problem.

Kendra wants to walk her dog for an hour. She has 25 minutes left to walk. How long has she walked so far?

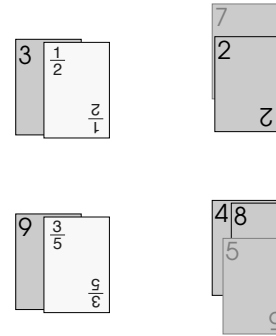
Draw lines to match the expressions.

- | | |
|--------------|---------------------------|
| 4×4 | 16×2 |
| 8×5 | $6 \times 5 + 6 \times 2$ |
| 8×4 | 5×5 |
| $20 + 5$ | 8×2 |
| 9×7 | $6 \times 7 - 2$ |
| 6×7 | $50 - 1$ |
| $32 \div 4$ | $9 \times 6 + 2$ |
| 7×7 | $70 - 7$ |
| 8×7 | $2 \times 2 \times 2$ |

Complete the magic square.

14	5	1	7
-1		8	13
		8	
8	11		-2

Play: The first player plays her cards to form all or part of the improper fractions. Any number of cards may be played per turn and to any row. Example shows $7/2$ and $48/5$. The numerator and denominator may be played in either order.



The player completing a fraction takes the row, sets aside the basic number cards to be reused, and collects the fraction card.

A player unable to play forms a new mixed number by laying down one of his basic cards and one of the fraction cards from the stock.

Always keep at least two mixed numbers on the table; when a row is completed and collected, prepare new mixed numbers from the stock. Reuse the basic number cards if the stock becomes exhausted.

F22.1 CORNERS WITH EIGHTHS

This is a fraction version of Corners Three (A38). The scoring is what makes this a fraction game; the numbers on the cards are considered to be eighths. The scoring provides practice in adding mixed numbers mentally.

Objective: To practice adding eighths and changing improper fractions to proper fractions without simplifying.

Number of players: Two to four.

Cards: The 50 Corners cards.

Layout: The stack of cards is placed face down on the table. Each player draws four cards initially and draws another card each time after playing a card. Players' cards are laid out face up in full view of all players.

Object of the game: To make the highest score.

Play: The rules of the game are the same as Corners Three (A38), except that the numbers on the cards are considered to be *eighths*.

Players do their own scoring. Most of the calculating can be done mentally. Following are some examples of scoring:

$$\text{Initially joining a 5 and 7: } \frac{12}{8} = 1\frac{4}{8}$$

$$\text{Next joining a 7 and 8: } 1\frac{4}{8} + \frac{15}{8} = 1\frac{19}{8} = 3\frac{3}{8}$$

$$\text{Next joining a 9 and 9: } 3\frac{3}{8} + \frac{18}{8} = 5\frac{5}{8}$$

F22.2 CORNERS WITH TENTHS

This is another fraction version of Corners Three (A38). For scoring the numbers on the cards are considered to be tenths. The game is played like Corners with Eighths (F22.1) except the numbers on the cards are tenths.

F22.3 SUBTRACTION CORNERS WITH EIGHTHS

To play this Corners subtraction game, players start with a certain value and subtract their scores. The winner is the first player to reach zero or the player with the lowest score if no one can play. The game is played like Corners with Eighths (F22.1).

The initial scores are as follows:

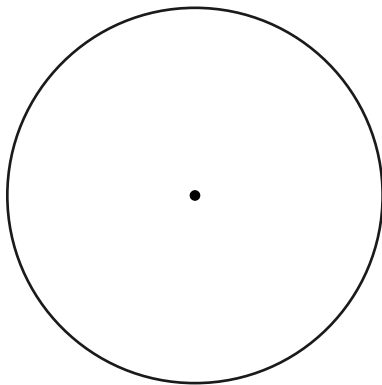
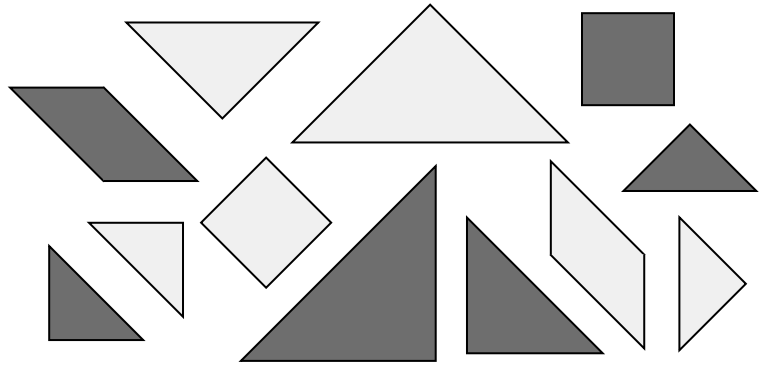
Number of players	2	3	4
Initial score	45	30	22

Name: _____

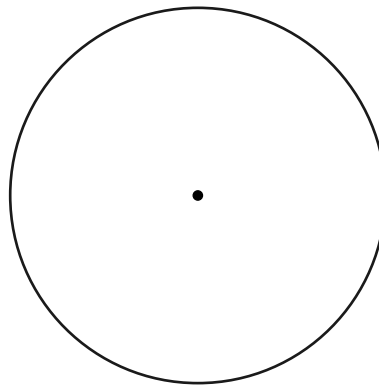
Date: _____

For the problems below, use the tangrams shown to find the percentage asked for.

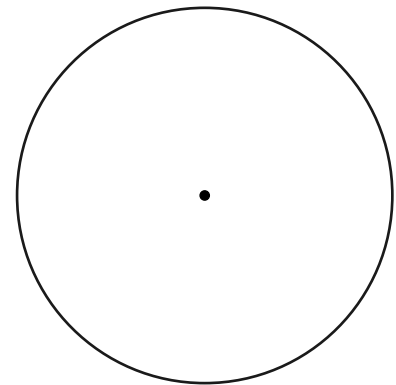
Use your percentage circle to show the answer, then record it below. Shade or hatch the circle so that it looks like the percentage circle answer.



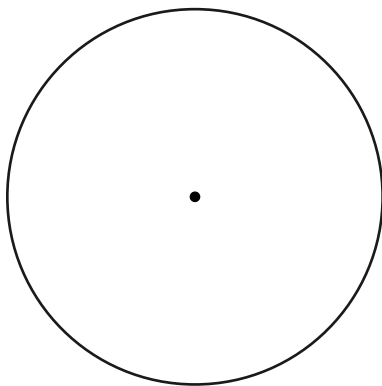
What percentage of the tangrams are in the darker color? _____



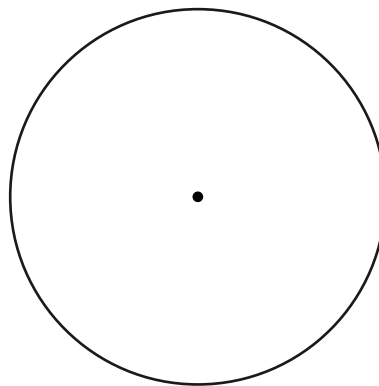
What percentage of the tangrams have right angles? _____



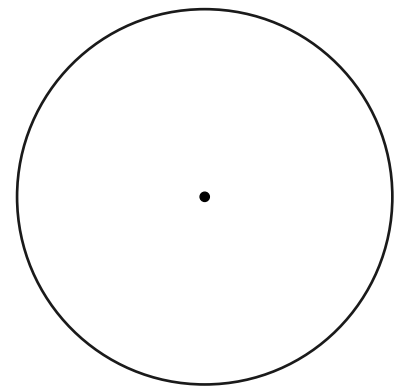
What percentage of the tangrams are triangles? _____



What percentage of the tangrams are quadrilaterals? _____



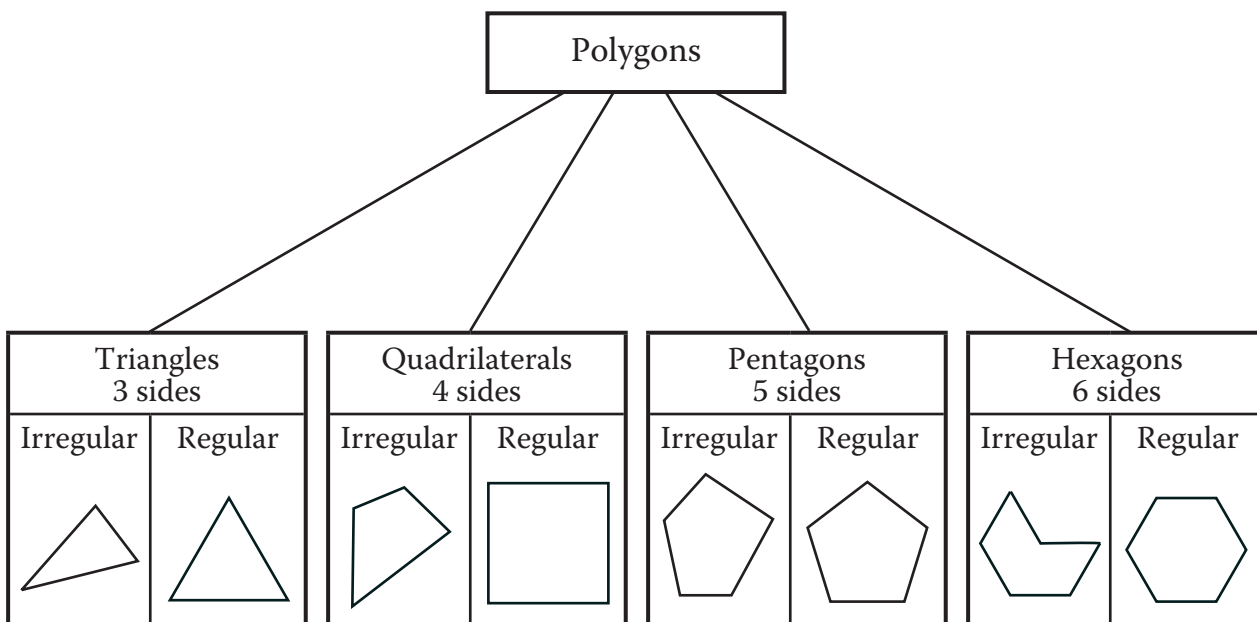
What percentage of the tangrams are polygons? _____



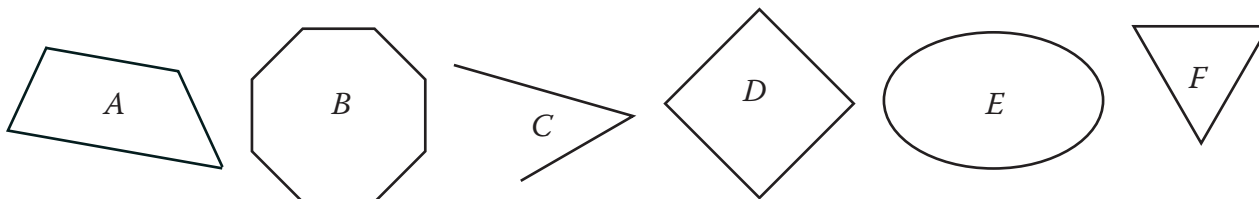
What percentage of the tangrams are rhombuses? _____

Name: _____

Date: _____

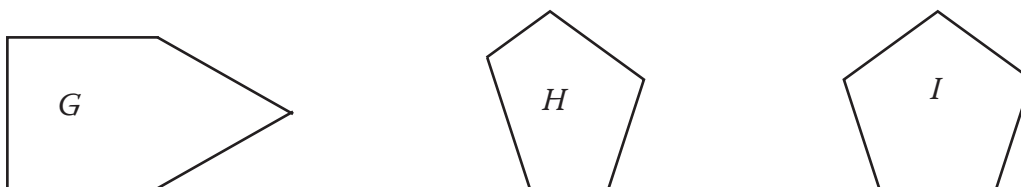


1. Which of the figures below are polygons? _____



2. Explain why the others are not polygons. _____

INFORMATION: A *regular polygon* has congruent sides and congruent angles.



3. Which pentagons above have all sides congruent? _____

4. Which pentagons above have all angles congruent? _____

5. Which pentagons above are regular pentagons? _____

6. What is another name for a regular triangle? _____

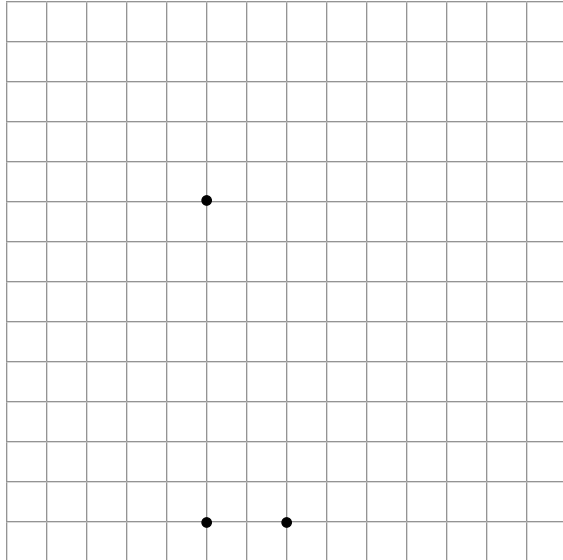
7. What is another name for a regular quadrilateral? _____

8. Which of the polygons in the first question are regular polygons? _____

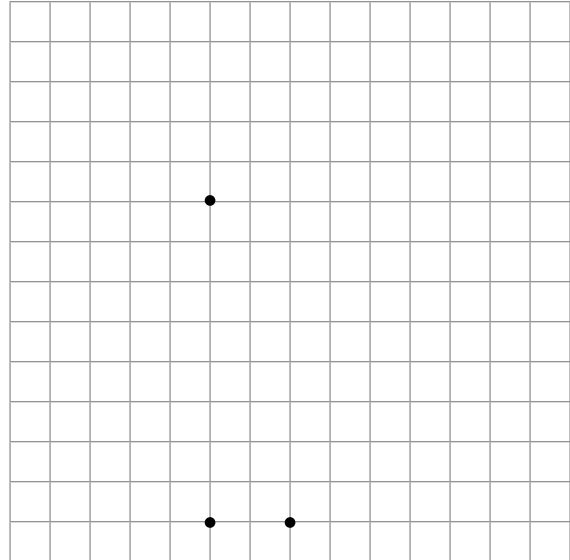
Name: _____

Date: _____

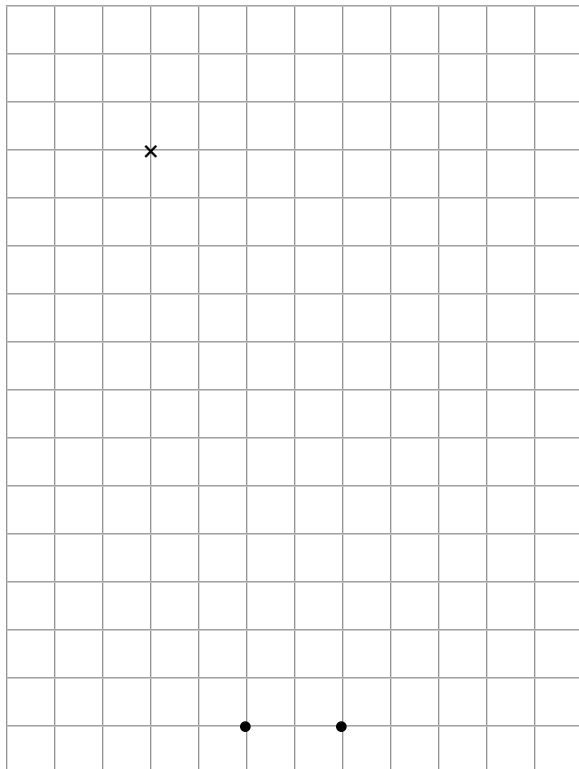
1. Draw the three views, top, front, and side, for a square pyramid that is 6 units high. The square base is 4 units on a side.



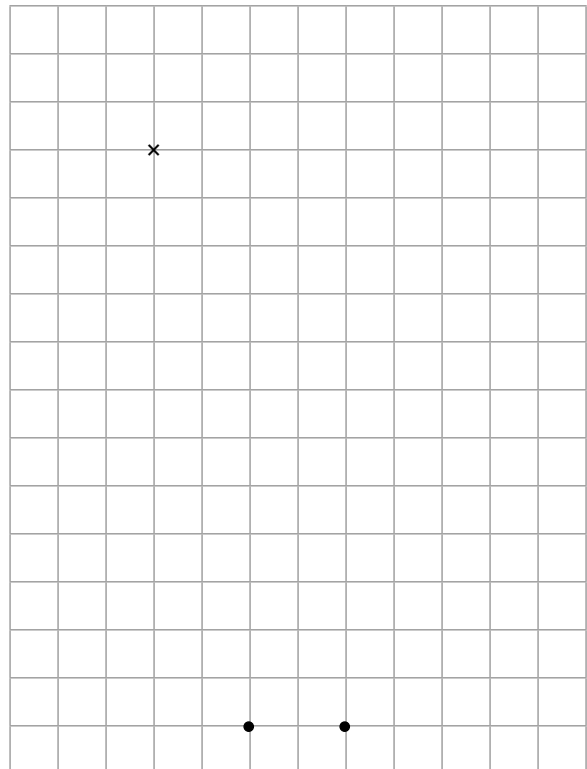
2. Draw the three views for the Problem 1 pyramid but now it is truncated so it is only 3 units high.



3. Draw the three views for a cone that is 8 units tall. The diameter of the base is 4 units. The "x" marks the center of the circle.



4. Draw the three views for the cone in Problem 3 but now it is truncated so it is now only 4 units tall. The "x" marks the center of the circle.



Name: _____

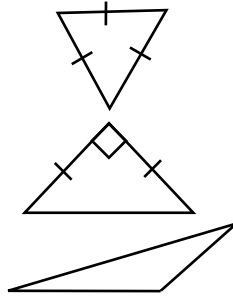
Date: _____

137-142. Draw lines to match each triangle by sides and angles.

Scalene triangle

Isosceles triangle

Equilateral triangle

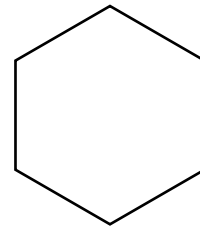
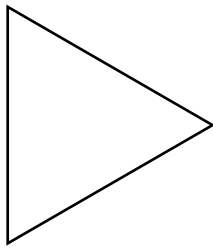


Obtuse triangle

Right triangle

Acute triangle

143-145. Draw all the lines of symmetry in the figures below and answer the questions.



How many lines of symmetry? _____

How many lines of symmetry? _____

How many lines of symmetry? _____

146-159. Fill in the blanks.

If you turn 360° , where will you end? _____

Name the angles in an isosceles right triangle. _____

What is special about the sides in an equilateral triangle. _____

How many angles does a hexagon have? _____

Can a rectangle also be a square? _____

Can a parallelogram be a square? _____

Can a polygon have only two sides? _____

How many inches are in 2 feet? _____

How many yards is 6 feet? _____

How many centimeters are in 2 decimeters? _____

How many decimeters are in a half a meter? _____

How many centimeters are in a meter? _____

How many milliliters are in a liter? _____

Which is longer, 3 feet or 1 meter? _____