

Most recent update: January 7, 2019

# RightStart™ Mathematics

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

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 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 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 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 61	12/29/2017	The three answers problems 2–4, C, are wrong. answers are <table border="1" style="margin-left: 20px; border-collapse: collapse; text-align: center;"> <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 $0.78 \text{ in}^2$ , not $0.7 \text{ in}^2$ . 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 <a href="#">pdf</a> .
Lesson 70	Worksheet 58	01/07/2019	The second sentence in Question 1 should read, "Use a <a href="#">tangram</a> to draw the height for both triangles using the horizontal lines <a href="#">as the base</a> ." See attached <a href="#">pdf</a> .
Lesson 75		02/15/2018	On the second page, the calculation for the triangular prism should read $1/2 \times 2.5 \times 2.1$ <a href="#">for the base</a> , calculating the <a href="#">volume at 19.7 cm<sup>3</sup></a> .
Lesson 76		04/11/2018	On the second page, last paragraph under the Problem 4 heading, the answer should read <a href="#">1,000,000,000</a> , not 1,000,000.000.
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 94		04/18/2018	Answer for the third Warm Up problem should be <a href="#">1 17/30</a> .
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 <a href="#">5/4</a> , not 4/3.
Lesson 131		04/18/2018	Last question in the conclusion should read: What is 20 millimeters divided by <a href="#">1 centimeter</a> ? [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 = <a href="#">1000 m</a> , not 1000 cm. See attached <a href="#">pdf</a> .
Lesson 139		04/18/2018	Answer for Worksheet 120-A, under the <, >, or = section, 45 days <a href="#">&lt;</a> 2 months.
Lesson 142	Worksheet 123	04/18/2018	Second to last question and answer for Worksheet 123 should read: What is the name of a quadrilateral with only two sides <a href="#">parallel</a> ? Answer trapezoid is correct. See attached <a href="#">pdf</a> .
Lesson 150		01/07/2019	Question 22, $151.89 \times 8.3$ should be <a href="#">1260.687</a> , not 1260.678.

**Warm-Up**

Divide. Use check numbers to check your answers.

$$4 \overline{)98765}$$

$$6 \overline{)98765}$$

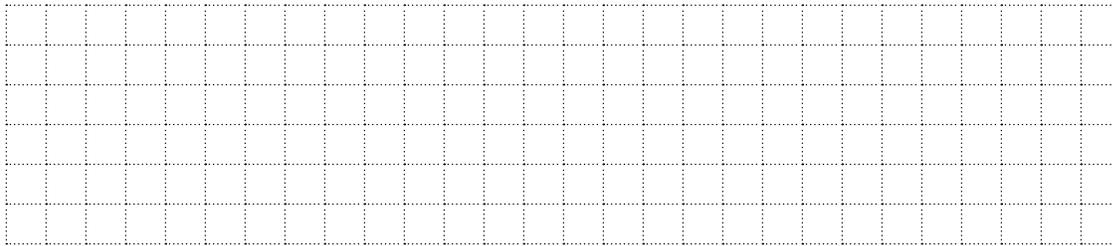
$$8 \overline{)98765}$$

**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: \_\_\_\_\_

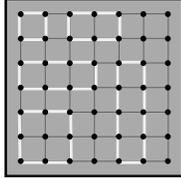
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A square formed by four pegs on the geoboard is 1 unit of area.

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

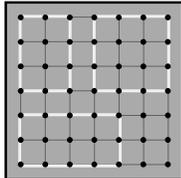
Fill in the table for each figure below.

Figures 1 to 5.



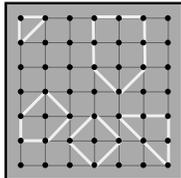
Area in Units	Number of Pegs	
	Boundary Pairs	Inside
1	2	

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.

\_\_\_\_\_  $P = w + h + w + h$

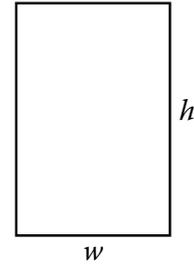
\_\_\_\_\_  $P = 2w + 2h$

\_\_\_\_\_  $P = w \times h$

\_\_\_\_\_  $P = 2(w + h)$

\_\_\_\_\_  $A = 2(w \cdot h)$

\_\_\_\_\_  $A = w \times h$



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

\_\_\_\_\_  $P = w + h + w + h$

\_\_\_\_\_  $P = 2w + 2h$

\_\_\_\_\_  $P = 2(w + h)$

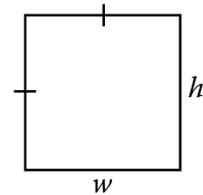
\_\_\_\_\_  $P = 4w$

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

\_\_\_\_\_  $A = w \cdot h$

\_\_\_\_\_  $A = w^2$

\_\_\_\_\_  $A = h^2$



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

\_\_\_\_\_  $P = 2w + 2h$

\_\_\_\_\_  $P = w \times s$

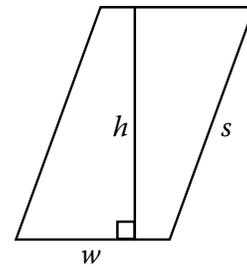
\_\_\_\_\_  $P = 2(w + s)$

\_\_\_\_\_  $A = 2(w \times h)$

\_\_\_\_\_  $A = ws$

\_\_\_\_\_  $A = wh$

\_\_\_\_\_  $A = w \cdot h$



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

\_\_\_\_\_  $P = w + b + h$

\_\_\_\_\_  $P = 2w + 2h$

\_\_\_\_\_  $P = w + b + a$

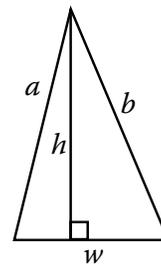
\_\_\_\_\_  $A = w + h$

\_\_\_\_\_  $A = \frac{1}{2}(w \times h)$

\_\_\_\_\_  $A = \frac{1}{2} \times (w + h)$

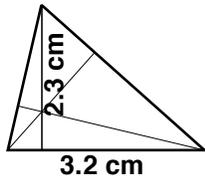
\_\_\_\_\_  $A = \frac{1}{2}wh$

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



**ACTIVITIES FOR TEACHING CONTINUED:**

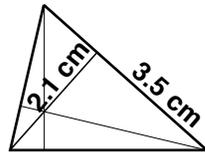
**Worksheet 55, Problem 1.** Tell the child to read the instructions for the first problem. Tell him the heights are drawn for him, but he needs to match the correct heights and widths. The solutions are below.



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

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

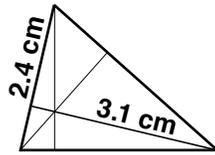
$$A = 3.7 \text{ cm}^2$$



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

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

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

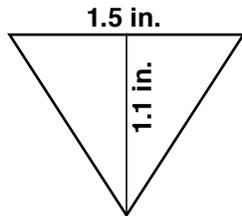


$$A = \frac{1}{2}wh$$

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

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

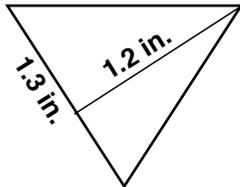
**Problem 2.** Tell him to complete the second problem on the worksheet. Tell him to use the triangle to draw the perpendicular line. The solutions are below.



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

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

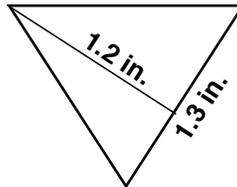
$$A = 0.83 \text{ in}^2$$



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

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

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



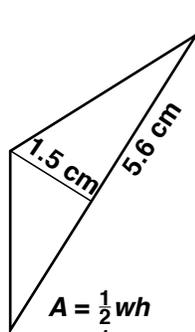
$$A = \frac{1}{2}wh$$

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

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

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.]

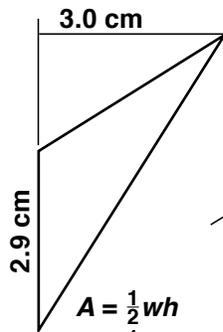
**Problem 3.** Tell the child to complete the third problem on the worksheet. Tell him that some of the sides of obtuse triangles need to be extended, which is done for him. The solutions are below.



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

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

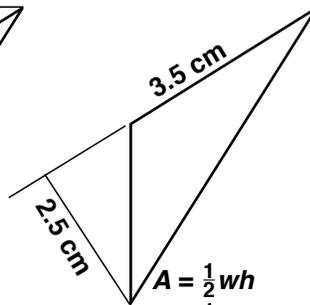
$$A = 4.20 \text{ cm}^2$$



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

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

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



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

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

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

**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.

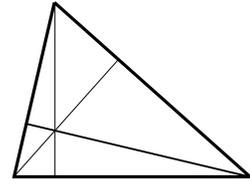
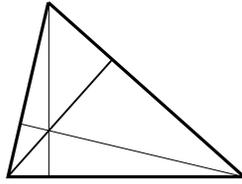
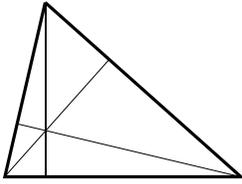
The calculated areas are not identical because the measurements are not exact. The more accurate the measurements, the closer the calculated areas will be.

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

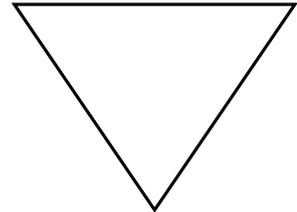
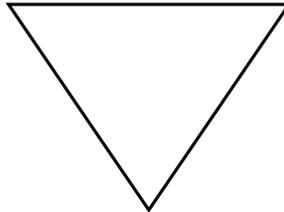
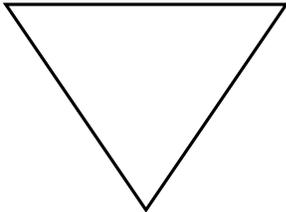
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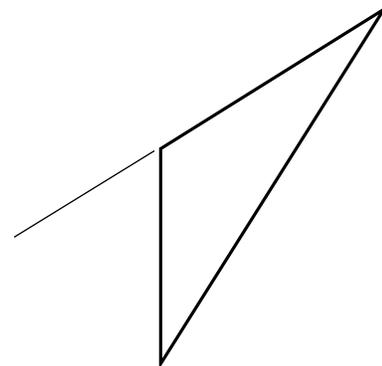
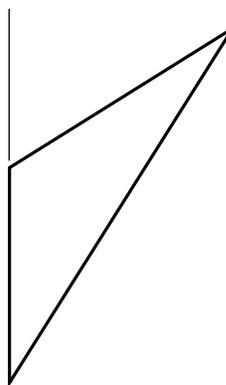
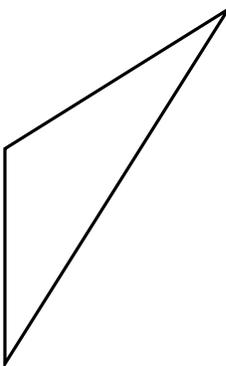
1. Find the area of the triangle below in three different ways. Measure to the nearest tenth of a centimeter.



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.



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

2. Find how many centimeters are in a yard.

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

1 yd = \_\_\_\_\_ × \_\_\_\_\_ × \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_

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

3. Find how many kilometers are in a mile.

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

1 mi = \_\_\_\_\_ × \_\_\_\_\_ × \_\_\_\_\_ × \_\_\_\_\_ × \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_

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.

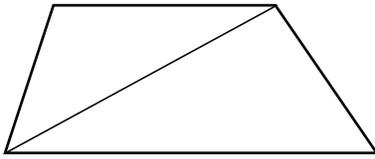
\_\_\_\_\_ → \_\_\_\_\_

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

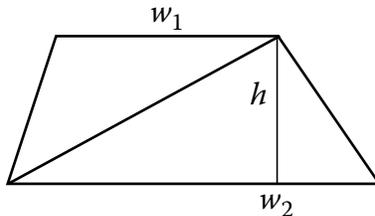
Date: \_\_\_\_\_

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.

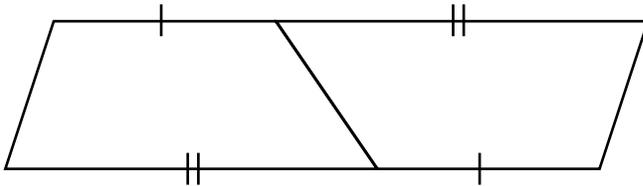


B. Write a formula for the area.

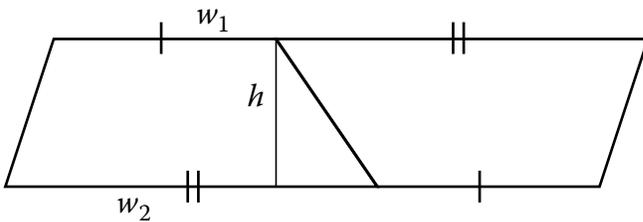


2. Find the area of the parallelogram. Then find the area of one trapezoid.

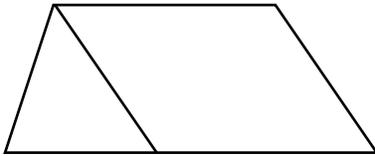
A. Measure in centimeters.



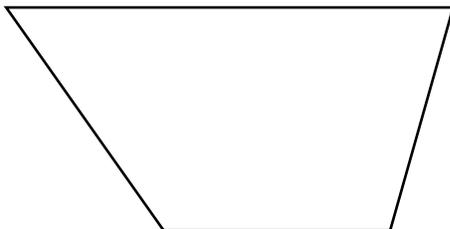
B. Write the formulas for the areas.



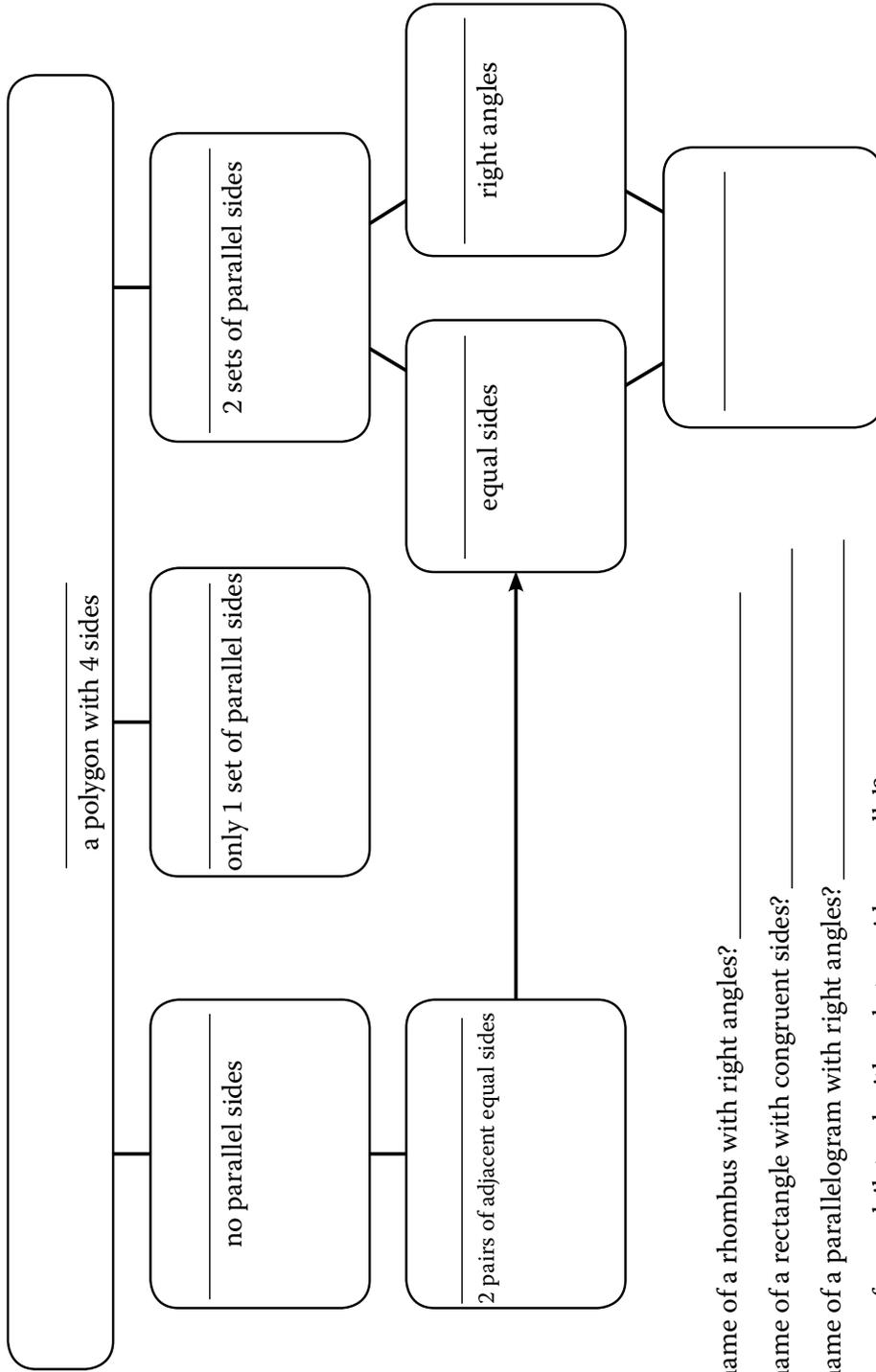
3. Find the area of the trapezoid in square centimeters by adding the areas of the parallelogram and triangle.



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



Name: \_\_\_\_\_ Date: \_\_\_\_\_  
 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:  $\parallel \parallel \parallel$  \_\_\_\_\_