



Summer Package
Grade 4 going to Grade 5
(Week 3)
2018

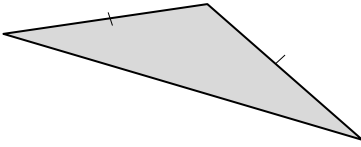
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Name _____

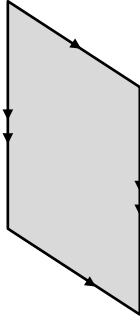
Date _____

1. Find and draw all lines of symmetry in the following figures. If there are none, write "none."

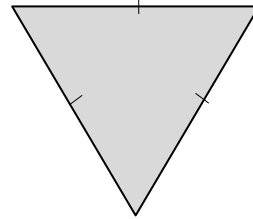
a.



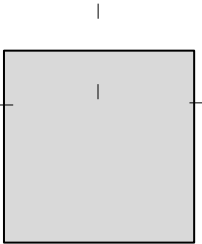
b.



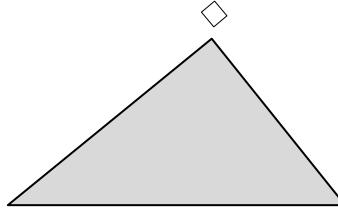
c.



d.



e.



f.



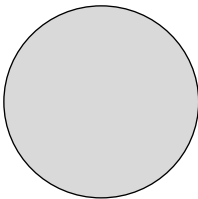
g. For each triangle listed below, state whether it is acute, obtuse, or right and whether it is isosceles, equilateral, or scalene.

Triangle a: _____

Triangle c: _____

Triangle e: _____

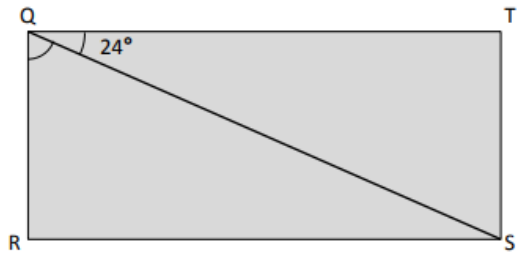
h. How many lines of symmetry does a circle have? What point do all lines of symmetry for a given circle have in common?



2. In the following figure, QRST is a rectangle. Without using a protractor, determine the measure of

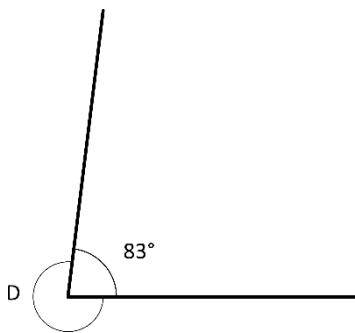
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$\angle RQS$. Write an equation that could be used to solve the problem.

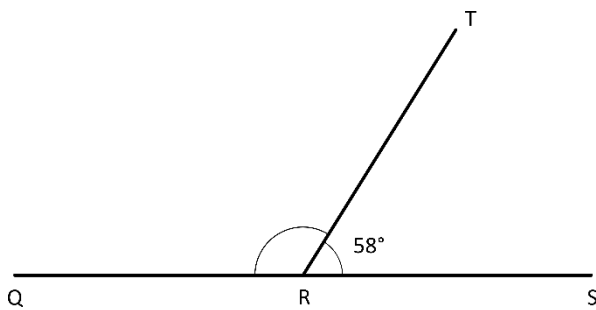


For each part below, explain how the measure of the unknown angle can be found without using a protractor.

- a. Find the measure of $\angle D$.

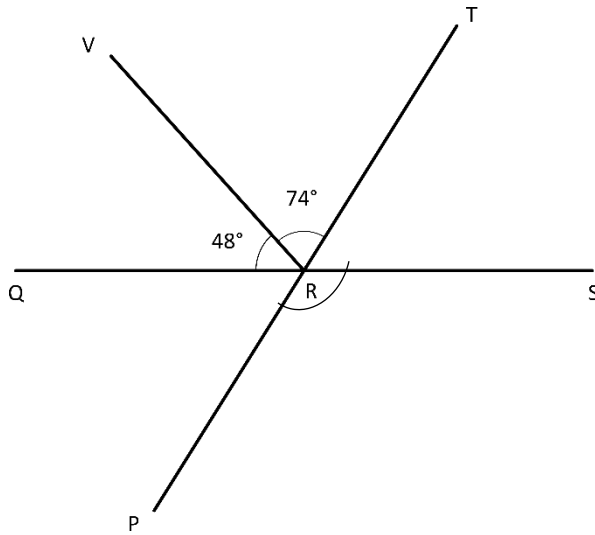


- b. In this figure, Q, R, and S lie on a line. Find the measure of $\angle QRT$.



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- c. In this figure, Q, R, and S lie on a line, as do P, R, and T. Find the measure of $\angle PRS$.



3. Mike drew some two-dimensional figures.

Sketch the figures, and answer each part about the figures that Mike drew.

- a. He drew a four-sided figure with four right angles. It is 4 cm long and 3 cm wide.

What type of quadrilateral did Mike draw?

How many lines of symmetry does it have?

- b. He drew a quadrilateral with four equal sides and no right angles.

What type of quadrilateral did Mike draw?

How many lines of symmetry does it have?

- c. He drew a triangle with one right angle and sides that measure 6 cm, 8 cm, and 10 cm.

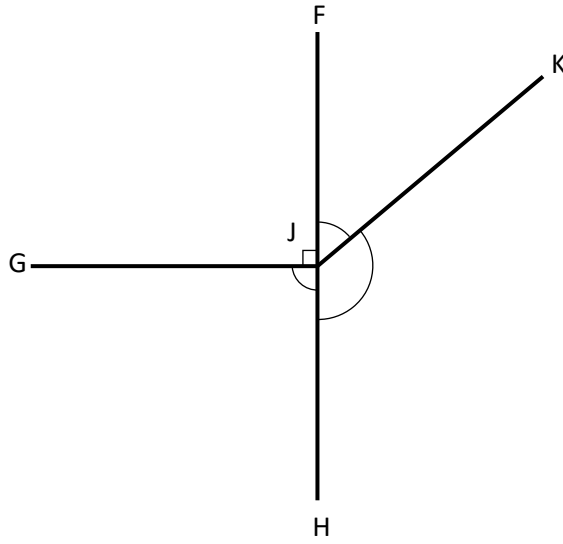
Classify the type of triangle Mike drew based on side length and angle measure.

How many lines of symmetry does it have?

- d. Using the dimensions given, draw the same shape that Mike drew in Part (c).

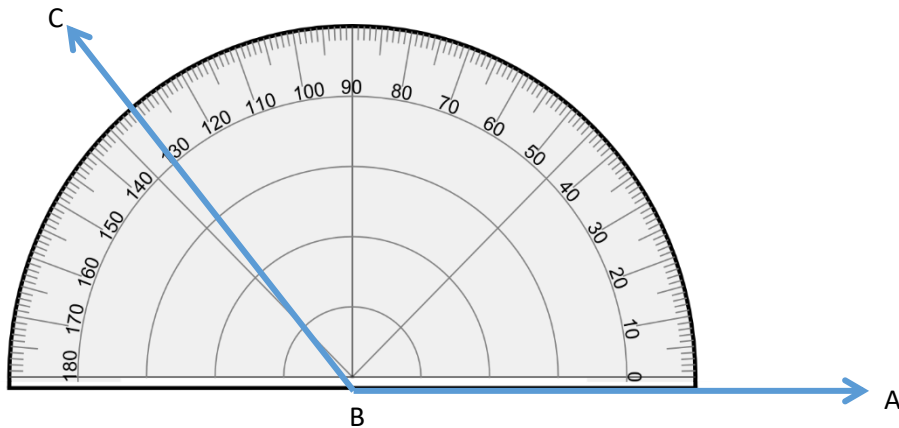
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- e. Mike drew this figure. Without using a protractor, find the sum of $\angle FJK$, $\angle KJH$, and $\angle HJG$.



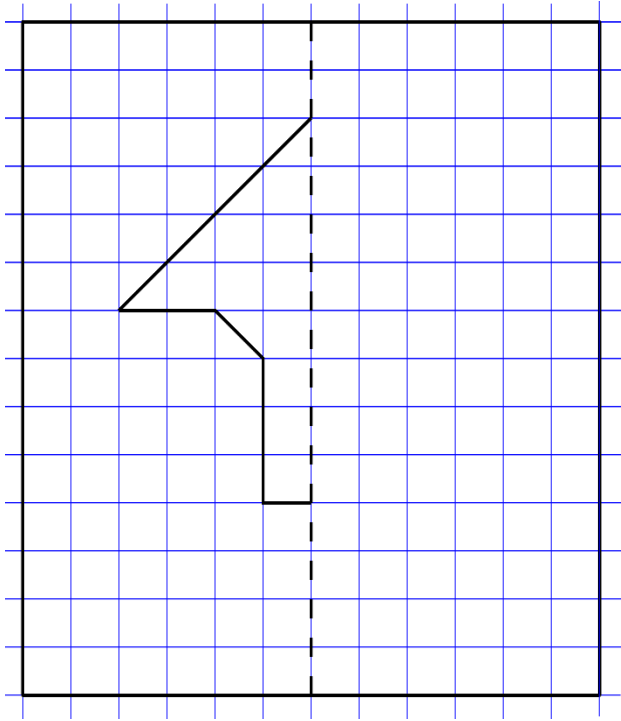
- f. Points F, J, and H lie on a line. What is the measure of $\angle KJH$ if $\angle FJK$ measures 45° ? Write an equation that could be used to determine the measure of $\angle KJH$.

- g. Mike used a protractor to measure $\angle ABC$ as shown below and said the result was exactly 130° . Do you agree or disagree? Explain your thinking.

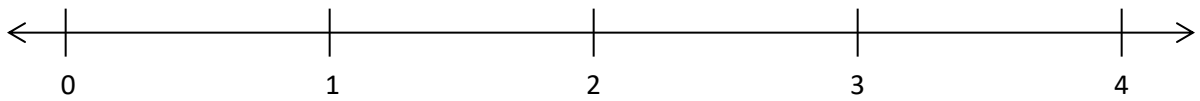


- h. Below is half of a line-symmetric figure and its line of symmetry. Use a ruler to complete Mike's drawing.

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4. a. Partition the tape diagram to show $5 \times \frac{2}{3}$. Partition the number line to show $10 \times \frac{1}{3}$.



- b. Use the models above to explain why $5 \times \frac{2}{3} = 10 \times \frac{1}{3}$.

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5. Fill in the circles below with $<$, $=$, or $>$ to make true number sentences. Use decomposition or multiplication to justify your answer.

a. 7 $\frac{43}{6}$

b. $11\frac{1}{3}$ $\frac{34}{3}$

c. $\frac{13}{6}$ $\frac{38}{12}$

6. Generate a pattern of at least 13 fractions by adding $\frac{4}{3}$ to $\frac{1}{3}$ and then continuing to add $\frac{4}{3}$ to each fraction. Circle each fraction equal to a whole number. Write what you notice about the pattern of whole numbers. The first two fractions are written for you.

$\frac{1}{3}$, $\frac{5}{3}$,

7. Find each sum or difference.

a. $6\frac{4}{10} + 7\frac{7}{10}$

b. $3\frac{3}{8} + 6\frac{5}{8} + 1\frac{7}{8}$

c. $1\frac{9}{12} - 1\frac{4}{12}$

d. $5\frac{2}{5} - 1\frac{3}{5}$

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8. a. Rewrite $3 \times \frac{6}{8}$ as the product of a unit fraction and a whole number. Solve.

a. Rewrite $4 \times 6\frac{2}{3}$ as the product of a unit fraction and a whole number. Solve.

9. Determine if the following are true or false. Explain how you know using models or words. Make false problems true by rewriting the right side of the number sentence.

a. $7\frac{1}{3} = 7 + \frac{1}{3}$

b. $\frac{5}{3} = \frac{3}{3} + \frac{2}{3}$

c. $\frac{13}{6} - \frac{5}{6} = \frac{13-5}{6}$

d. $\frac{11}{3} = 11 + \frac{1}{3}$

e. $\frac{7}{8} + \frac{7}{8} + \frac{7}{8} + \frac{7}{8} = 4 \times \frac{7}{8}$

f. $5 \times 3\frac{3}{4} = 15 + \frac{3}{4}$

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10. The chart to the right shows data Amashi collected about butterfly wingspans.

a. At the bottom of this page, create a line plot to display the data in the table.

b. What is the difference in wingspan between the widest and narrowest butterflies on the chart?

c. Three butterflies have the same wingspan. Explain how you know the measurements are equal.

Butterfly	Wingspan (inches)
Monarch	$3\frac{7}{8}$
Milbert's Tortoiseshell	$2\frac{5}{8}$
Zebra Swallowtail	$2\frac{1}{2}$
Viceroy	$2\frac{6}{8}$
Postman	$3\frac{3}{8}$
Purple Spotted Swallowtail	$2\frac{2}{8}$
Julia	$3\frac{2}{4}$
Southern Dogface	$2\frac{3}{8}$
Tiger Swallowtail	$3\frac{1}{2}$
Regal Fritillary	$3\frac{4}{8}$

Solve each problem. Draw a model, write an equation, and write a statement for each.

d. Amashi wants to display a Postman and Viceroy side by side in a photo box with a width of 6 inches. Will these two butterflies fit? Explain how you know.

e. Compare the wingspan of the Milbert's Tortoiseshell and the Zebra Swallowtail using $>$, $<$, or $=$.

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- f. The Queen Alexandra Birdwing can have a wingspan that is 5 times as wide as the Southern Dogface's. How many inches can the Birdwing's wingspan be?
- g. Amashi discovered a pattern. She started with $2\frac{2}{8}$ inches and added $\frac{1}{8}$ inch to each measurement.
List the next four measurements in her pattern. Name the five butterflies whose wingspans match the measurements in her pattern.