

# April 13, 2015 <sup>4th</sup>

## Starter

If you are 5' tall and weigh 105 lbs,  
compute the following:

- ① If you were as tall as a giraffe (17'),  
how much would you weigh?

$$\begin{array}{l} \# \\ W \end{array} \frac{5}{105} \times \frac{17}{x}$$

Flower

$$\frac{5x}{5} = \frac{1,785}{5}$$

$$x = 357 \text{ lbs}$$

- ② If you weighed the same as a peacock (13 lbs)  
how tall would you be?

$$\frac{5}{105} \times \frac{x}{13}$$

$$\frac{105x}{105} = \frac{65}{105}$$

$$x = 0.62 \text{ ft}$$

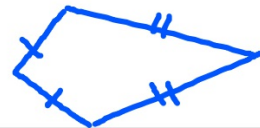
## 4/13 Quadrilaterals

Definition: 4-sided polygon  
"closed figure"

Work with your partner and name as many  
**QUADRILATERALS** as you can.

- 1 Rhombus
- 2 Square
- 3 Parallelogram
- 4 Rectangle
- 5 Trapezoid
- 6 Kite

Work with your partner and match the colored names of quadrilaterals with their definitions below.



1 **Trapezoid**  
 Quadrilateral with exactly one pair of parallel sides

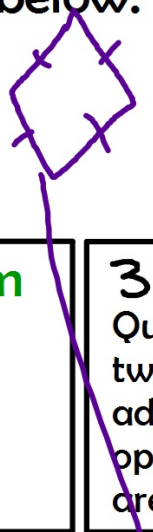
2 **Parallelogram**  
 Quadrilateral with opposite sides that are parallel and congruent

3 **Kite**  
 Quadrilateral with two pairs of congruent adjacent sides and opposite sides that are not congruent

4 **Square**  
 Quadrilateral with four congruent sides, four right angles, and opposite sides that are parallel and congruent

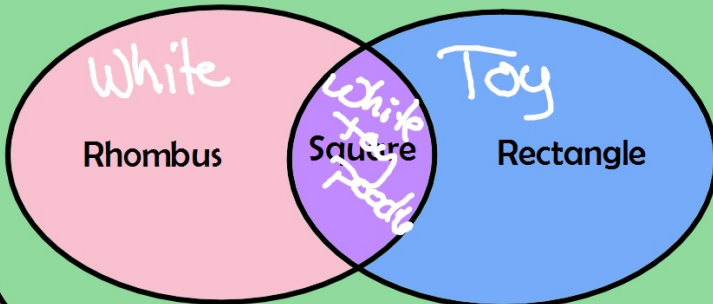
5 **Rectangle**  
 Quadrilateral with four right angles and opposite sides that are parallel and congruent

6 **Rhombus**  
 Quadrilateral with four congruent sides and opposite sides that are parallel and congruent

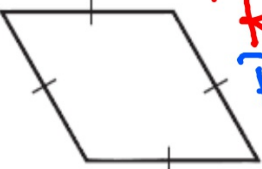


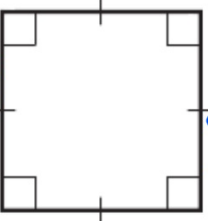
# Dogs Quadrilaterals


Parallelogram  
Poodle





Classify the quadrilateral.


1.  Rhombus  
Parallelogram

2.  Square  
Rectangle  
Parallelogram  
Rhombus

3.  Rectangle  
Parallelogram

4.  Parallelogram

5.  Trapezoid

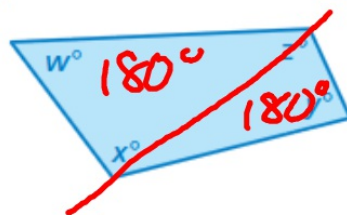
6.  Kite

## Key Idea

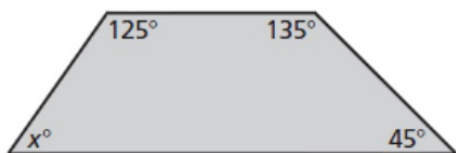
### Sum of the Angle Measures of a Quadrilateral

**Words** The sum of the angle measures of a quadrilateral is  $360^\circ$ .

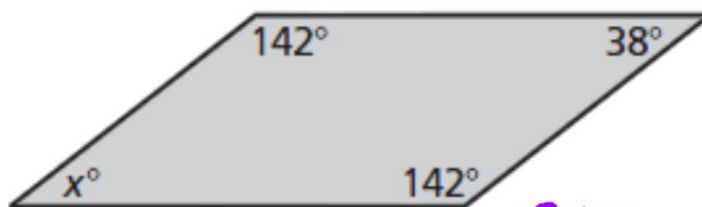
**Algebra**  $w + x + y + z = 360$



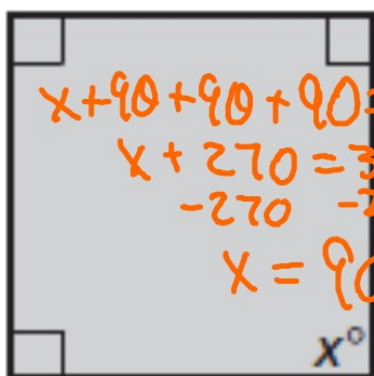
Find the value of  $x$



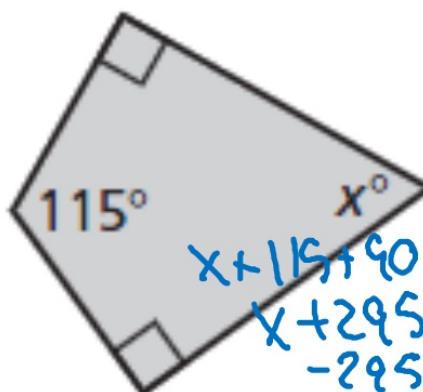
$$\begin{aligned} x + 125 + 135 + 45 &= 360 \\ x + 305 &= 360 \\ -305 \quad -305 & \\ x &= 55 \end{aligned}$$



$$\begin{aligned} x + 142 + 142 + 38 &= 360 \\ x + 322 &= 360 \\ -322 \quad -322 & \\ x &= 38 \end{aligned}$$



$$\begin{aligned} x + 90 + 90 + 90 &= 360 \\ x + 270 &= 360 \\ -270 \quad -270 & \\ x &= 90 \end{aligned}$$



$$\begin{aligned} x + 115 + 90 + 90 &= 360 \\ x + 295 &= 360 \\ -295 \quad -295 & \\ x &= 65 \end{aligned}$$



Fill in the blank with *always*, *sometimes*, or *never*.  
Explain by drawing diagrams.

A rectangle is sometimes a square.

A rhombus is Always a parallelogram.

A trapezoid is Never a kite.

A parallelogram is sometimes a rhombus.

Draw the following trapezoids. If it is not possible, explain why.

a. a trapezoid with <sup>only</sup> one right angle *Cannot do*

b. a trapezoid with <sup>only</sup> two right angles

c. a trapezoid with <sup>only</sup> three right angles → makes the 4th  $90^\circ$

d. a trapezoid with four right angles → rectangle or square





**Homework**

**Due**