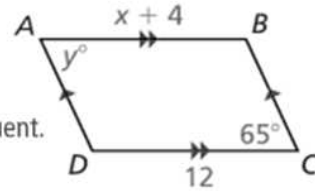


Starter

14-Oct-15

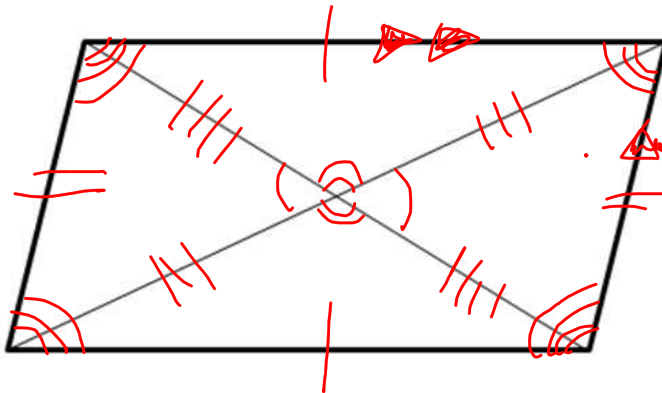
Find the values of x and y .

$AB = CD$ Opposite sides of a parallelogram are congruent.
 $x + 4 = 12$ Substitute $x + 4$ for AB and 12 for CD .
 $x = 8$ Subtract 4 from each side.

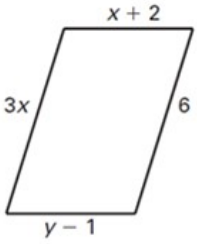


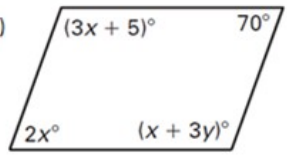
By the Parallelogram Opposite Angles Theorem, $\angle A \cong \angle C$, or $m\angle A = m\angle C$.
 So, $y^\circ = 65^\circ$.

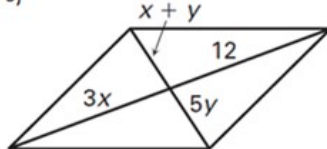
Mark everything you know to be congruent on the parallelogram. Mark any lines that are parallel.

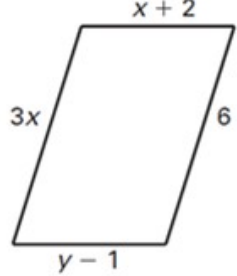


Determine the value of x and y in each of the following parallelograms.

1) 

2) 

3) 

1) 

$$\frac{3x}{3} = \frac{6}{3}$$

$$x = 2$$

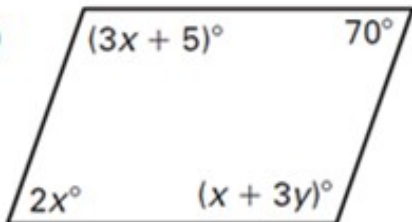
$$x + 2 = y - 1$$

$$2 + 2 = y - 1$$

$$4 = y - 1$$

$$\begin{array}{r} +1 \\ 4 = y - 1 \\ \hline 5 = y \end{array}$$

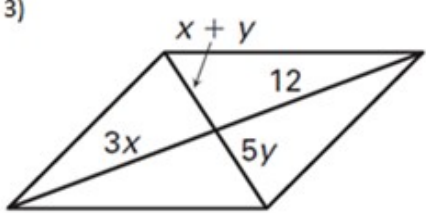
2)



$2x = 70$
 $\frac{2x}{2} = \frac{70}{2}$
 $x = 35$

$3x + 5 = x + 3y$
 $3(35) + 5 = 35 + 3y$
 $105 + 5 = 35 + 3y$
 $110 = 35 + 3y$
 $\begin{array}{r} 110 \\ - 35 \\ \hline 75 \end{array} = \begin{array}{r} 35 + 3y \\ - 35 \\ \hline 3y \end{array}$
 $\frac{75}{3} = \frac{3y}{3}$
 $25 = y$

3)



$3x = 12$
 $\frac{3x}{3} = \frac{12}{3}$
 $x = 4$

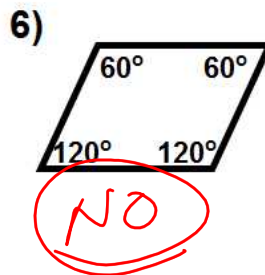
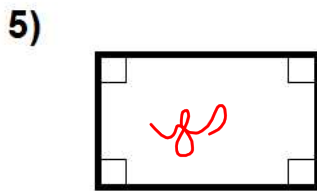
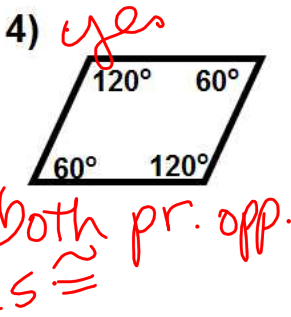
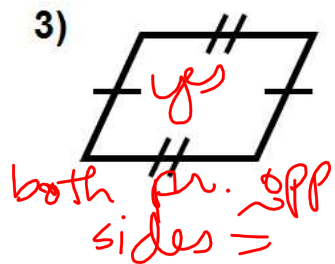
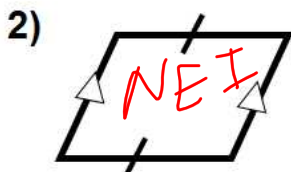
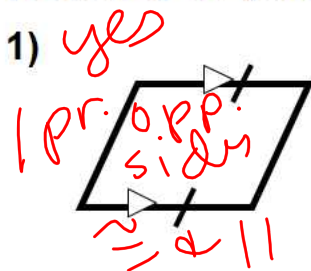
$5y = x + y$
 $5y = 4 + y$
 $\begin{array}{r} 5y \\ - y \\ \hline 4y \end{array} = \begin{array}{r} 4 + y \\ - y \\ \hline 4 \end{array}$
 $\frac{4y}{4} = \frac{4}{4}$
 $y = 1$

5 Ways to Prove a Quad. is a \square

- 1) * If a quad. has both pairs of opp. sides \cong , the quad. is a \square .
- 2) * If a quad. has both pairs of opp. \angle s \cong , the quad. is a \square .
- 3) * If one pair of opp. sides of a quad are both \cong & \parallel , the quad. is a \square .
- 4) * If the diagonals of a quad. bisect each other, the quad. is a \square .
- 5) def. of \square
(both pr. opp. sides \parallel)

copy & answer

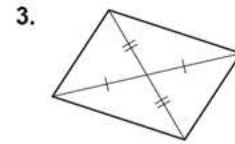
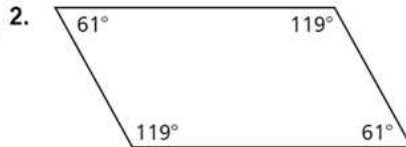
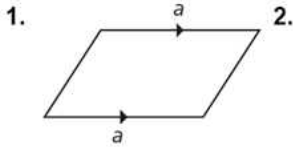
Determine if each of the following quadrilaterals can be proven to be parallelograms. Justify your answer.



Extra Practice

SJ pg. 209

In Exercises 1–3, state which theorem you can use to show that the quadrilateral is a parallelogram.



One pr.
Opp. Sides
 \cong & \parallel

both pr.
Opp. \angle s \cong

Diags.
Bisect each other

In Exercises 4–7, find the values of x and y that make the quadrilateral a parallelogram



$$3x - 20 + x + 40 = 180$$

$$4x + 20 = 180$$

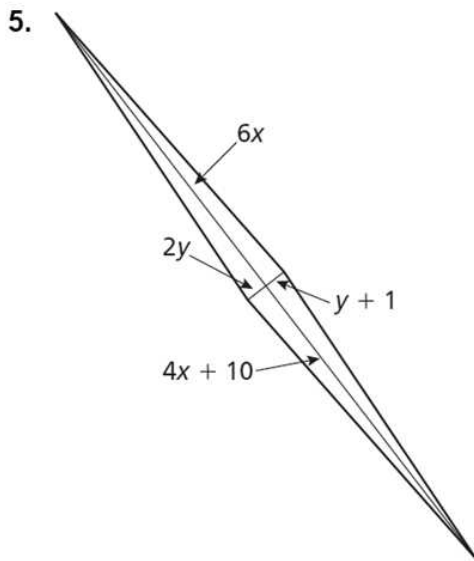
$$4x = 160$$

$$x = 40$$

$$4y = 100$$

$$y = 25$$

In Exercises 4–7, find the values of x and y that make the quadrilateral a parallelogram.



$$6x = 4x + 10$$

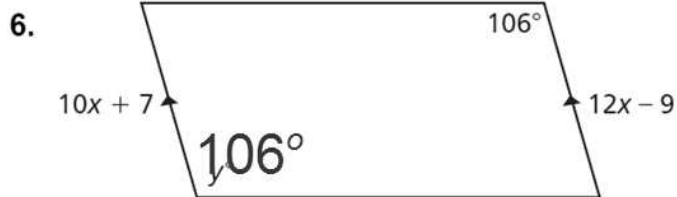
$$2x = 10$$

$$x = 5$$

$$2y = y + 1$$

$$y = 1$$

In Exercises 4–7, find the values of x and y that make the quadrilateral a parallelogram.



$$12x - 9 = 10x + 7$$

$$2x - 9 = 7$$

$$2x = 16$$

$$x = 8$$

In Exercises 4–7, find the values of x and y that make the quadrilateral a parallelogram.

$$6x - 1 = 5x + 16$$

$$x - 1 = 16$$

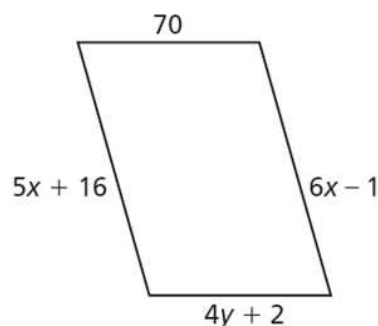
$$x = 17$$

$$4y + 2 = 70$$

$$4y = 68$$

$$y = 17$$

7.



Homework
worksheet Practice 6-3
(Prentice Hall)

END DAY 2