Geometry
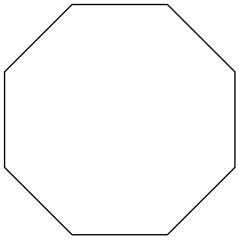
Corrective Assignment Unit 5
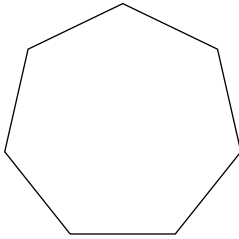
Find the measure of one interior angle in each regular polygon. Round your answer to the nearest tenth if necessary.
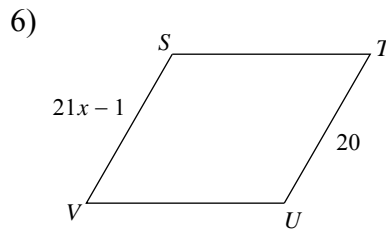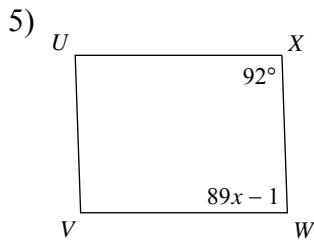
1)

2) regular 16-gon

Find the measure of one exterior angle in each regular polygon. Round your answer to the nearest tenth if necessary.
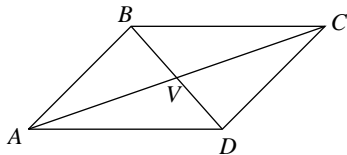
3)

4) regular pentagon
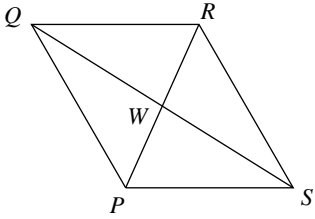
Solve for x. Each figure is a parallelogram.

5)

6)

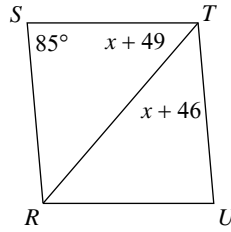**Find the measurement indicated in each parallelogram.**
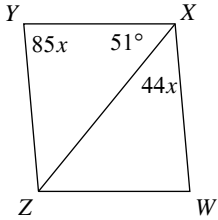
7) $BV = 11x$
   $VD = 10x + 1$
   Find BD

8) $QW = x + 7$
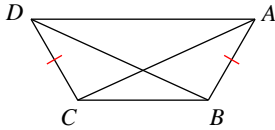 $QS = 4x - 2$
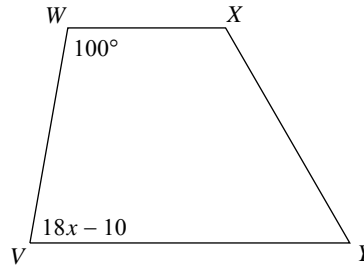   Find QS

9) Find $m\angle STU$

10) Find $m\angle ZXW$

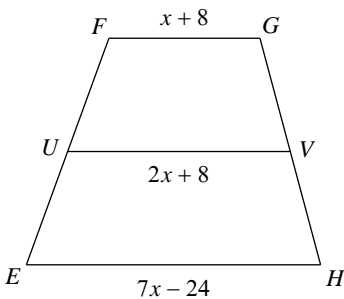**Solve for x. Each figure is a trapezoid.**
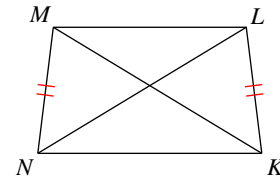
11) $BD = 19$
    $AC = 31 - x$

12)

Find the length of the midsegment of each trapezoid.

Find the length of the diagonal indicated for the trapezoid.

13)

14) $MK = 3x - 20$
    $NL = 4x - 30$
    Find MK

Geometry

Corrective Assignment Unit 5

Find the measure of one interior angle in each regular polygon. Round your answer to the nearest tenth if necessary.

1)

135°

2) regular 16-gon

157.5°

Find the measure of one exterior angle in each regular polygon. Round your answer to the nearest tenth if necessary.

3)

51.4°

4) regular pentagon

72°

Solve for x. Each figure is a parallelogram.

5)

U   X
92°
89x − 1
V   W

1

6)

S   T
21x − 1
20
V   U

1

Find the measurement indicated in each parallelogram.

7) $BV = 11x$
     $VD = 10x + 1$
     Find BD

22

-1-

8) $QW = x + 7$
   $QS = 4x - 2$
   Find QS

30

9) Find $m\angle STU$

95°

10) Find $m\angle ZXW$

44°

Solve for x. Each figure is a trapezoid.

11) $BD = 19$
    $AC = 31 - x$

12

12)

5

Find the length of the midsegment of each trapezoid.

13)

24

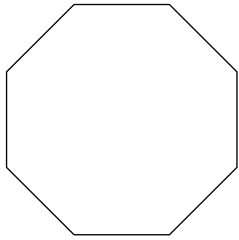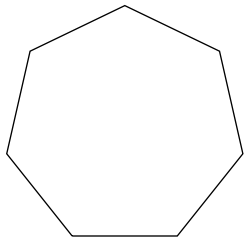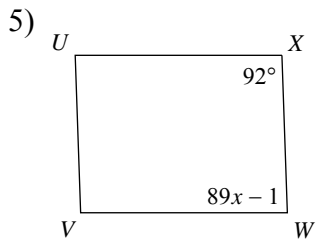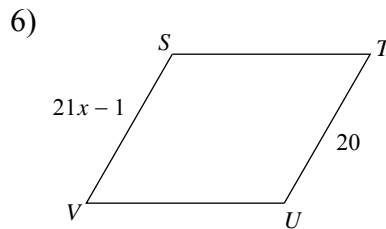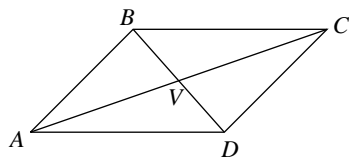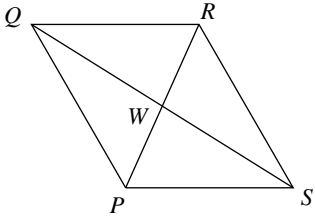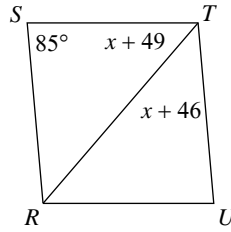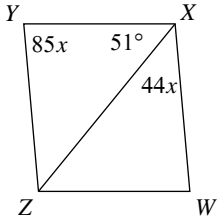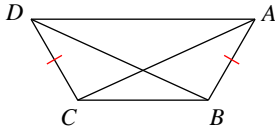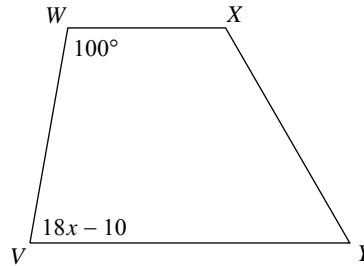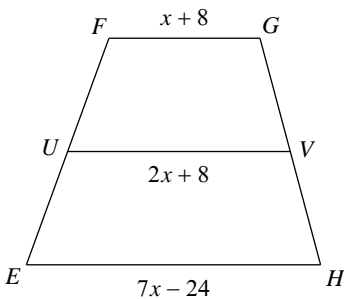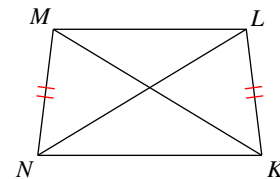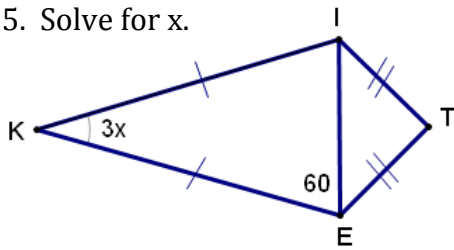**Find the length of the diagonal indicated for the trapezoid.**

14) $MK = 3x - 20$
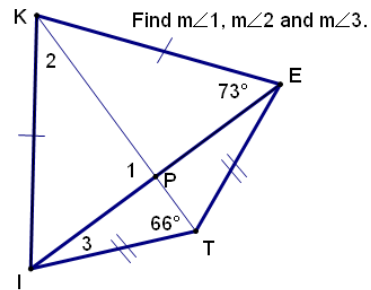 $NL = 4x - 30$
    Find MK

10

15. Solve for x.

$3x$

60

16. Find m∠1, m∠2 and m∠3.

$73°$

$66°$

$m∠1 = $ _____

$m∠2 = $ _____

$m∠3 = $ _____

Set up and solve for x and y using a system of linear equations.
Assume IJKF is a parallelogram.

17.

$x + 17$

$2x - 1$

y

$4y$
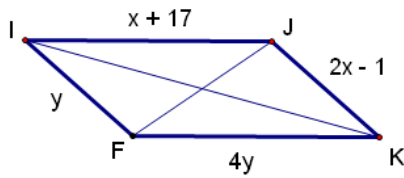
18. Set up and solve a quadratic equation to find the value of x in the following parallelogram.

$9k - 8$

k^2
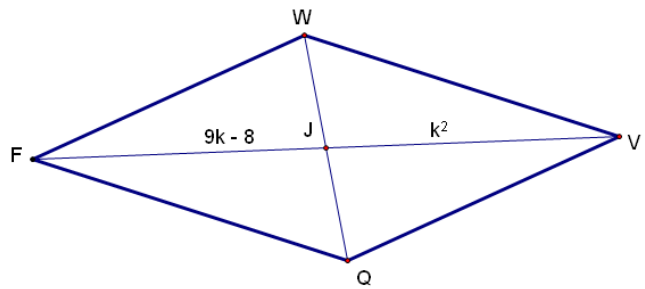
19. For what value of x is parallelogram RHOM a rhombus?

$14x - 35$

$12x + 65$

20.

$5x + 40$

120

For what value of x is parallelogram RECT a rectangle?

Application and Extension

Show all of your work clearly and completely!
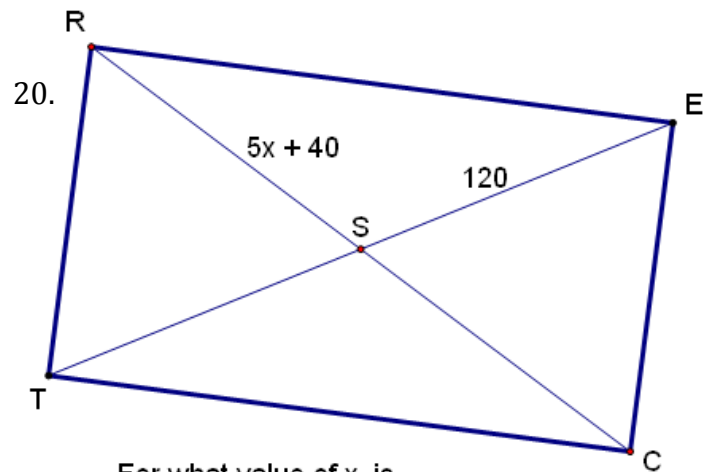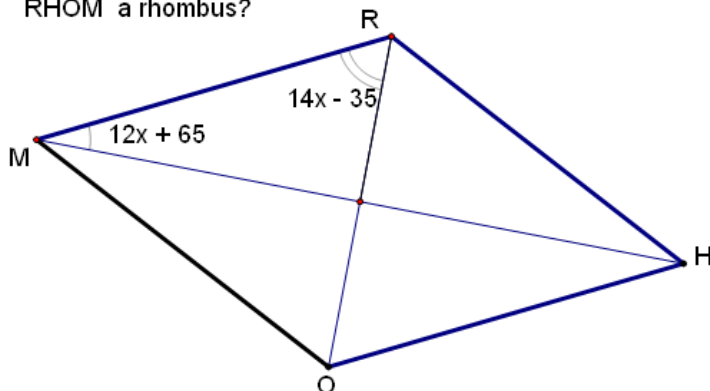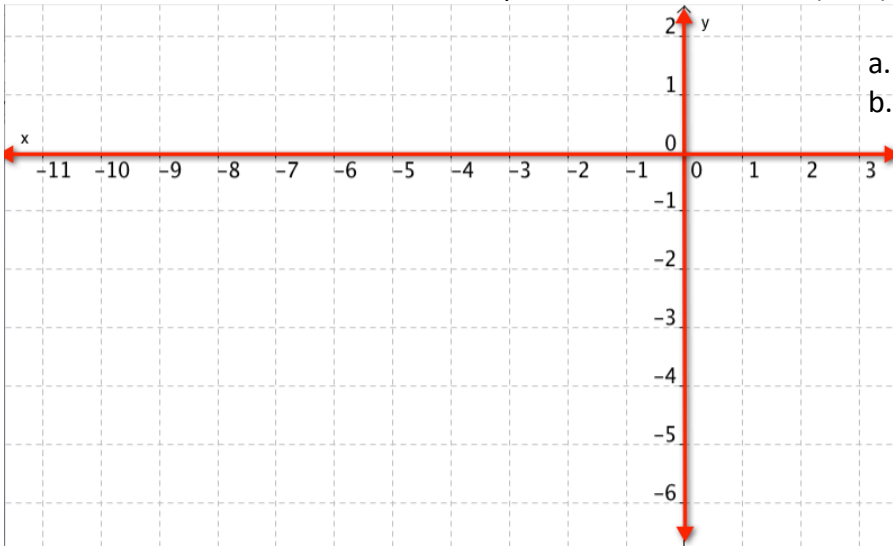
1. The coordinates of the vertices of quadrilateral BRUS are B(-8, 1), R(0, 0), U(-1, -5) and S(-9, -4)

  a. Graph and label BRUS.

  b. Use the slope formula to determine if BRUS is a parallelogram.

$$m = \frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1}$$

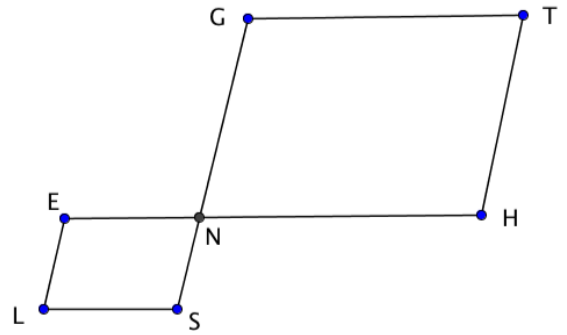 c. Examine your answer to part b and determine if BRUS is a rectangle. How do you know?

  d. Use the distance formula to determine whether BRUS's diagonals are congruent.

$$D = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

2. Draw rhombus RHOM with diagonals $\overline{RO}$ and $\overline{MH}$. Find x if $m\sphericalangle HMO = 44°$ and $m\sphericalangle HMR = (4x + 4)°$.

3. **Given**: ▱ LENS and NGTH

Prove : ∡S is supplementary to ∡T

Statements	Reasons

4.   The car at each vertex of a Ferris Wheel holds a maximum of 5 people. The sum of the interior angles of the Ferris Wheel is 8280°. What is the maximum number of people the Ferris Wheel can hold?