

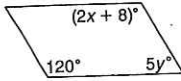
Mrs. Brown's Ch 6 Geometry Practice Test

Key

#1-3, Decide whether each statement is always, sometimes, or never true.

1. A square is a rhombus *always*
2. A parallelogram is a trapezoid *never*
3. A quadrilateral is a parallelogram *sometimes*

4. Determine the value of x and y to make the quadrilateral a parallelogram



$$120 = 2x + 8$$

$$112 = 2x$$

$$56 = x$$

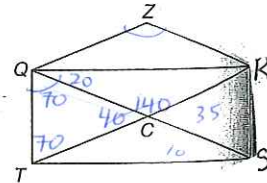
$$120 + 5y = 180$$

$$5y = 60$$

$$y = 12$$

5. Use rectangle QRST and parallelogram QZRC to solve each:

- a. $QS = 10$, $QC = 2x + 1$ and $TC = 3x - 1$, find x $\frac{1}{2}(10) = 2x + 1$
 $5 = 2x + 1$
 $x = 2$
- b. $m\angle TQC = 70^\circ$, find $m\angle QZR$ 140°



- c. $m\angle RCS = 35^\circ$, find $m\angle RTS$



$$180 - 145 = 35 \div 2 = 17.5$$

- d. If $QR = 13$ and $RS = 4.5$, Find QS

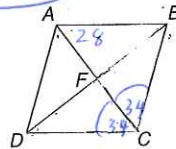
$$13^2 + 4.5^2 = QS^2$$

$$189.25 = QS^2$$

$$QS = 13.76$$

6. Use rhombus ABCD to find each value.

- a. If $m\angle BAF = 28^\circ$, find $m\angle ACD$ 28°
- b. Find x if $m\angle AFB = 16x + 6$ $16x + 6 = 90$
 $x = 5.25$
- c. If $m\angle ACD = 34^\circ$, find $m\angle ABC$.

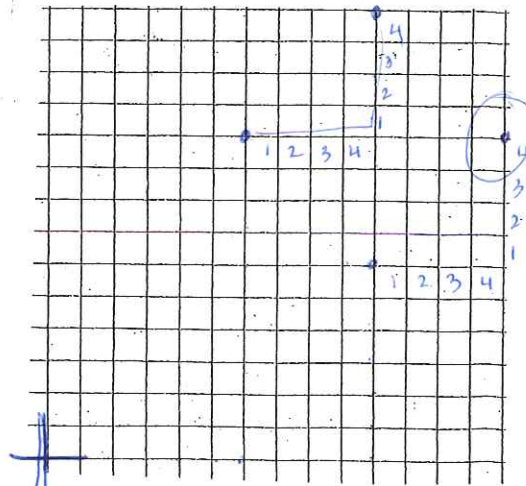


$$180 - 68 = 112^\circ$$

7. WXYZ is a square. Use the graph paper at right to find the missing point

W(10,6), X(6,10), Y(10,14) Z = ?

$$(14, 10)$$



8. WXYZ is an isosceles trapezoid with a median of \overline{MN} .

a. If $XY = 21.7$ and $ZW = 93.6$, find MN

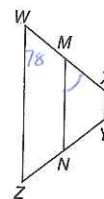
$$\frac{21.7 + 93.6}{2} = 57.65$$

b. Find $m\angle XMN$ if $m\angle WZN = 78^\circ$.

$$78^\circ \text{ (base } \angle s =)$$

c. If $m\angle XWZ = 2x - 7$ and $m\angle XYZ = 117$, find x .

$$2x - 7 = 63 \quad 180 - 117 = 63$$
$$x = 35$$



9. Find the sum of the interior angles for an octagon.

$$1080^\circ$$

$$(8-2) \cdot 180$$

10. Find the measure of an interior angle for a regular 19-gon.

$$161.05^\circ$$

$$\frac{(19-2) \cdot 180}{19}$$

11. What type of regular polygon has an interior angle measure of 168° ?

$$168 = \text{int } \angle$$

$$12 = \text{ext } \angle$$

$$360 \div 12 = 30 \text{ sides}$$