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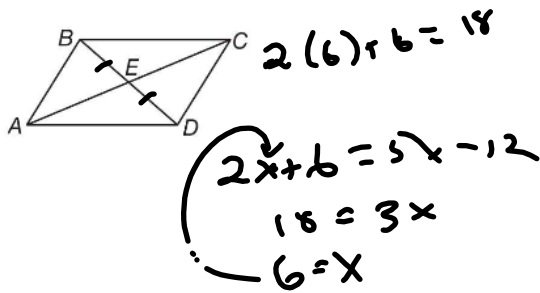
Chapter 6 Mid-Chapter Review

Part I: Write the letter for the correct answer in the blank at the right of each question.

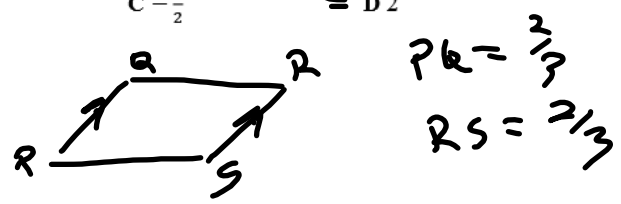
1. Find the measure of each exterior angle of a regular 56-gon. Round to the nearest tenth.
 A 3.2 **B 6.4** C 173.6 D 9720

$$\frac{360}{56}$$

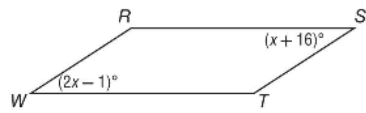
2. Given $BE = 2x + 6$ and $ED = 5x - 12$ in parallelogram $ABCD$, find BD .
 F 6 **H 18**
 G 12 **J 36**



3. If the slope of \overline{PQ} is $\frac{2}{3}$ and the slope of \overline{QR} is $-\frac{1}{2}$, find the slope of \overline{SR} so that $PQRS$ is a parallelogram.
A $\frac{2}{3}$ B $\frac{3}{2}$ C $-\frac{1}{2}$ **D 2**



4. Find $m\angle W$ in parallelogram $RSTW$.
F 17 H 55
G 33 J 125



$$2x - 1 = x + 16$$

$$x = 17$$

$$2(17) - 1 = 33$$

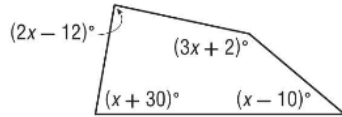
5. Find the sum of the measures of the interior angles of a convex 48-gon.
 A 172.5 B 360 **C 8280** D 8640

$$(48 - 2) \cdot 180 =$$

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Part II

6. Find x .



$$7x + 10 = 360$$

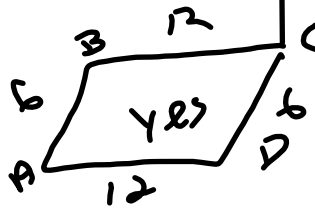
$$7x = 350$$

$$x = 50$$

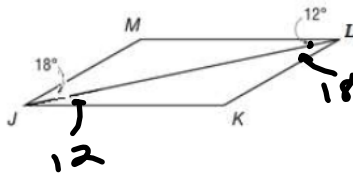
7. $ABCD$ is a parallelogram with $m\angle A = 138$. Find $m\angle B$.

8. Determine whether $ABCD$ is a parallelogram if $AB = 6$, $BC = 12$, $CD = 6$, and $DA = 12$. Justify your answer.

opp sides are \cong
yes



9. In parallelogram $MLKJ$, find $m\angle MLK$ and $m\angle LKJ$.



$$\angle MLK = 30^\circ$$

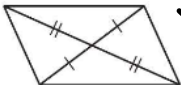
$$m\angle LKJ = 180 - 30 = 150^\circ$$

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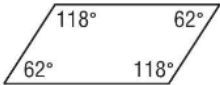
10. $XYWZ$ is a quadrilateral with vertices $W(1, -4)$, $X(-4, 2)$, $Y(1, -1)$, and $Z(-2, -3)$. Determine if the quadrilateral is a parallelogram. Use slope to justify your answer.

$$XY = \frac{-1 - 2}{1 - (-4)} = \frac{-3}{5} \therefore$$

Determine whether each quadrilateral is a parallelogram. Justify your answer.

11.  **yes**
 diagonals bisect each other

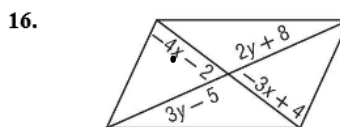
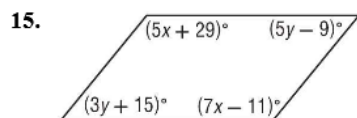
12.  **No**

13.  **yes**
 opp \angle 's are \cong

14.  **NO**

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ALGEBRA Find x and y so that the quadrilateral is a parallelogram.

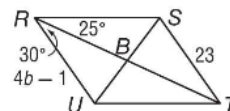


$$\begin{aligned} -4x - 2 &= -3x + 4 \\ +3x & \quad +3x \\ -x - 2 &= 4 \\ -x &= 6 \\ x &= -6 \end{aligned}$$

ALGEBRA Use $\square RSTU$ to find each measure or value.

17. $m\angle RST =$ 125°

18. $m\angle STU =$ 55°



19. $m\angle TUR =$ 125

20. $b =$ b = 6

$$\begin{aligned} 4b - 1 &= 23 \\ 4b &= 24 \end{aligned}$$

