

Geometry Ch. 6-7 Test Review

Name: KEY

1. Find each measure.

a. $BC = \frac{70.2}{2} = 35.1$

c. $XC = 32.4$

e. $m\angle BAX$

$180 - 42$

138°

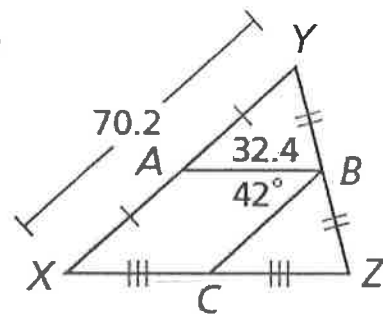
b. $XZ = 32.4(2)$
 $= 64.8$

d. $m\angle BCZ$
 42°

f. $m\angle YXZ$

$180 - 138$

42°



2. Tell if the measures can be the side lengths of a triangle.

a. 9, 12, 16

Yes

b. 11, 14, 27

No

c. 7, 9, 11

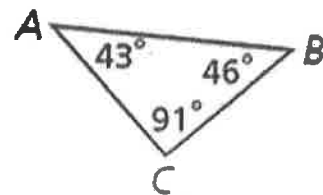
Yes

d. 8, 15, 17

Yes

3. A) List the sides in order from shortest to longest.

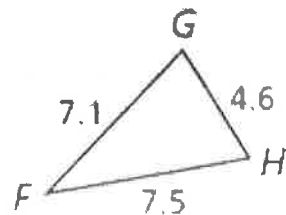
\overline{BC} , \overline{AC} , \overline{AB}



(shortest side is across from smallest angle, longest side is across from largest angle)

B) List the angles in order from smallest to largest.

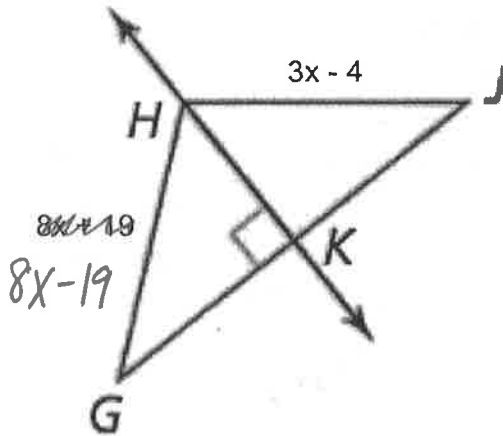
$\angle F$, $\angle H$, $\angle G$



Geometry Ch. 6-7 Test Review

Name: _____

4. Find the length of HJ



$$8x - 19 = 3x - 4$$

$$5x = 15$$

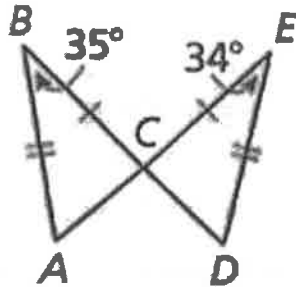
$$x = 3$$

$$HJ = 3(3) - 4$$

$$HJ = 5$$

5. How does side AC compare to side DC?

$$AC > DC$$



6. Find the sum of the interior angle measures of a convex dodecagon.

$$\begin{aligned} &(n-2) 180 \\ &(12-2) 180 \\ &(10) 180 = \boxed{1800^\circ} \end{aligned}$$

7. Find the measure of EACH interior angle of a regular pentagon

$$\begin{aligned} &(n-2) 180 \\ &(5-2) 180 \\ &(3) 180 \\ &540 \end{aligned} \qquad \frac{540^\circ}{5} = 108^\circ$$

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8. Find the measure of b in figure $FGHJL$. Then, find the measure of angle LFG .

$$33b + 16b + 10b + 28b + 15b + 18b = 360$$

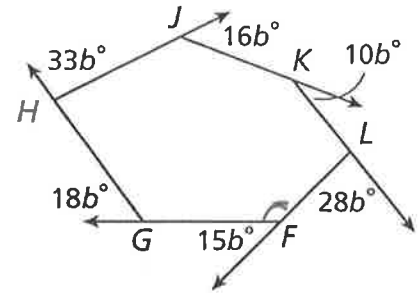
$$120b = 360 \quad m\angle LFG = 180 - 15b$$

$$b = 3$$

$$= 180 - 15(3)$$

$$= 180 - 45$$

$$= 135^\circ$$

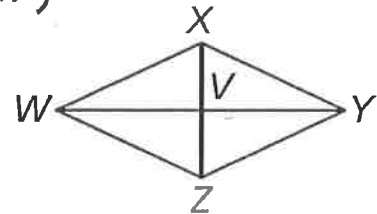


9. In rhombus $WXYZ$, $WX = 7a + 1$, $WZ = 9a - 6$, and $VZ = 3a$. Find each measure.

a. $WZ = 9(3.5) - 6 = 25.5$ b. $XV = 3(3.5) = 10.5$

c. $XY = 25.5$

d. $XZ = 21$



$$7a + 1 = 9a - 6$$

$$7 = 2a$$

$$3.5 = a$$

10. Find the measure of angle C

$$3n - 18 = 2n + 9$$

$$n = 27$$

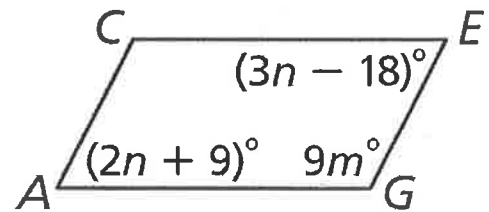
$$m\angle A = 2(27) + 9$$

$$= 54 + 9$$

$$= 63$$

$$m\angle C = 180 - 63$$

$$= 117^\circ$$



11. Solve for the measure of each angle in the shape

$$m\angle 1 = 57$$

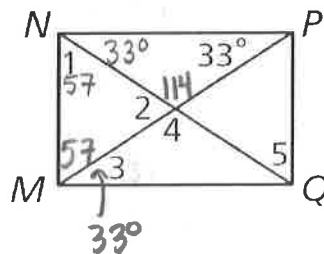
$$m\angle 2 = 66$$

$$m\angle 3 = 33$$

$$m\angle 4 = 114^\circ$$

$$m\angle 5 = 57^\circ$$

rectangle $MNPQ$



rhombus $CDGH$

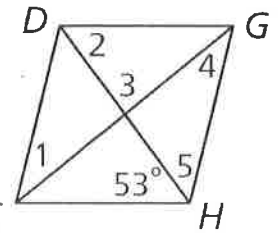
$$m\angle 1 = 37^\circ$$

$$m\angle 2 = 53^\circ$$

$$m\angle 3 = 90^\circ$$

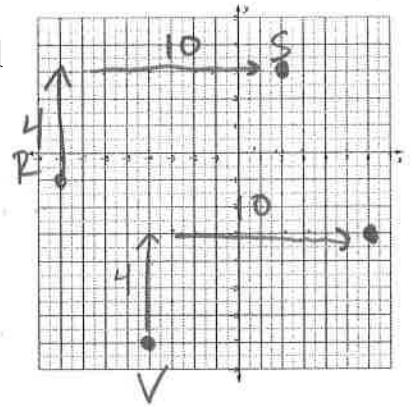
$$m\angle 4 = 37^\circ$$

$$m\angle 5 = 53^\circ$$



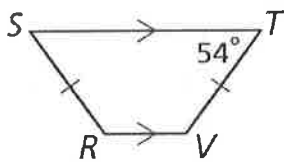
12. Three vertices of $\square RSTV$ are $R(-8, 1)$, $S(2, 3)$, and $V(-4, -7)$. Find the coordinates of vertex T .

$(6, -3)$



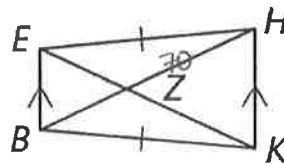
13. Find each measure

- a) $m\angle R$ and $m\angle S$



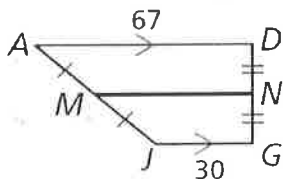
$m\angle S = 54^\circ$
 $m\angle R = 126^\circ$

- b) BZ if $ZH = 70$
 and $EK = 121.6$



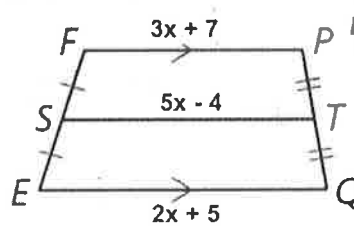
$BZ = 121.6 - 70$
 $BZ = 51.6$

- c) MN



$\frac{1}{2}(67 + 30) = MN$
 $48.5 = MN$

- d) EQ



$5x - 4 = \frac{1}{2}(3x + 7 + 2x + 5)$
 $5x - 4 = \frac{1}{2}(5x + 12)$
 $5x - 4 = 2.5x + 6$
 $2.5x = 10$
 $x = 4$

$EQ = 2(4) + 5 = 13$

14. If $\angle RST = 80$ and $\angle RUT = 60$, find the measure of $\angle SRV$ AND $\angle STU$.

$m\angle SRV = 90 - 40 = 50^\circ$
 $m\angle STU = 180 - (40 + 30)$
 $180 - 70$
 $m\angle STU = 110^\circ$

