

HW: Feb. 6 Answer Key

HW: Interior Angles of a Triangle & Parallel Lines cut by a Transversal

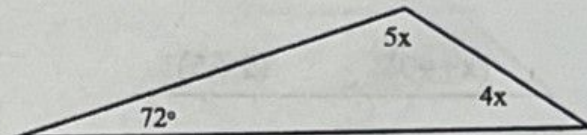
Name: _____

Math 7H - Feb. 6

Created for you by Ms. Nhetseubanh

glue on page 26

1. Find the value of x and the measures of each angle.



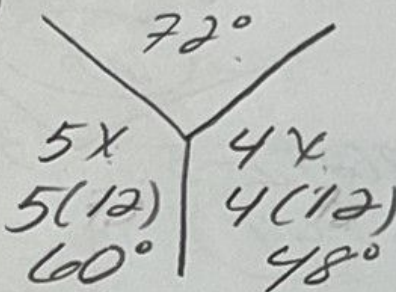
$$72 + 5x + 4x = 180$$

$$72 + 9x = 180$$

$$\begin{array}{r} 72 + 9x = 180 \\ -72 \quad -72 \\ \hline \end{array}$$

$$\frac{9x}{9} = \frac{108}{9}$$

$$x = 12$$

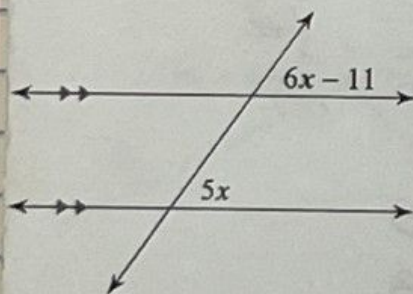


Identify the type of triangle shown in the diagram. acute Δ

b/c it has 3 \angle s less than 90°

2. Identify the angle relationship then solve for x .

corresponding



$$5x = 6x - 11$$

$$\begin{array}{r} 5x = 6x - 11 \\ -6x \quad -6x \\ \hline \end{array}$$

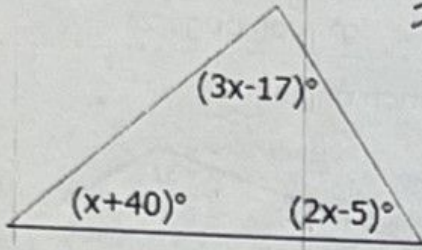
$$\frac{-x}{-1} = \frac{-11}{-1}$$

$$\frac{-x}{-1} = \frac{-11}{-1}$$

$$x = 11$$

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3. Find the value of x and the measures of each angle. Identify the type of triangle shown in the diagram.



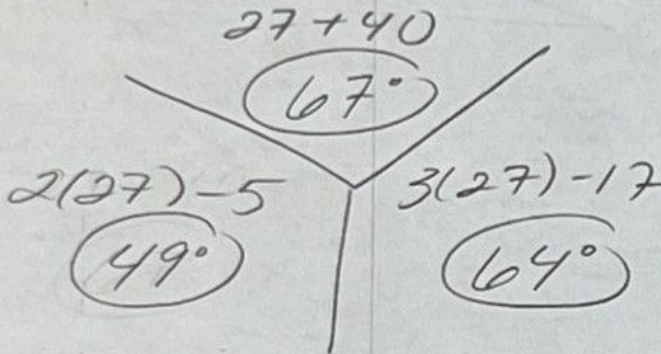
$$3x - 17 + x + 40 + 2x - 5 = 180$$

$$6x + 18 = 180$$

$$\begin{array}{r} 6x + 18 = 180 \\ -18 \quad -18 \\ \hline \end{array}$$

$$\frac{6x}{6} = \frac{162}{6}$$

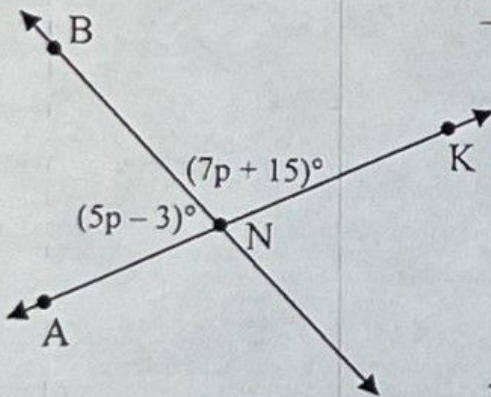
$$x = 27$$



Acute Δ
b/c it has
3 \angle s less
than 90°

4. $x = \underline{14}$

$m\angle BNA = \underline{67^\circ}$



$$5p - 3 + 7p + 15 = 180$$

$$12p + 12 = 180$$

$$\begin{array}{r} 12p + 12 = 180 \\ -12 \quad -12 \\ \hline \end{array}$$

$$\frac{12p}{12} = \frac{168}{12}$$

$$p = 14$$

$$5p - 3$$

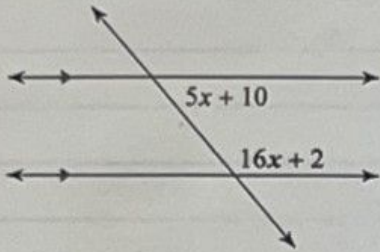
$$5(14) - 3$$

$$67^\circ$$

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5. Identify the angle relationship then solve for x.

same side interior



$$5x + 10 + 16x + 2 = 180$$

$$21x + 12 = 180$$

$$\begin{array}{r} -12 \\ \hline \end{array}$$

$$\frac{21x}{21} = \frac{168}{21}$$

$$x = 8$$

6. $x = \underline{7}$

$m\angle SIM = \underline{52^\circ}$

$$4x + 24 = 7x + 3$$

$$\begin{array}{r} -4x \\ \hline \end{array}$$

$$\begin{array}{r} -4x \\ \hline \end{array}$$

$$24 = 3x + 3$$

$$\begin{array}{r} -3 \\ \hline \end{array}$$

$$\begin{array}{r} -3 \\ \hline \end{array}$$

$$\frac{21}{3} = \frac{3x}{3}$$

$$7 = x$$

$$7x + 3$$

$$7(7) + 3$$

$$52^\circ$$

