

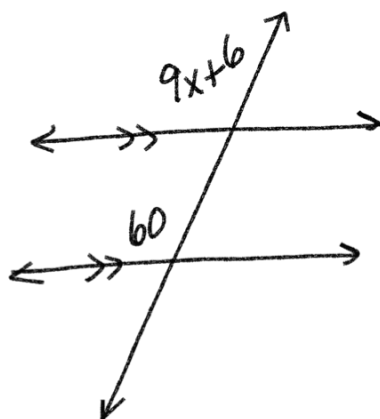
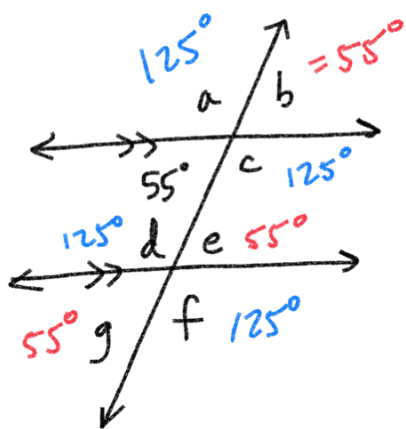
$a \hat{=} b$ linear pair
supplemental

$b \hat{=} d$ vertical angles
congruent

$b \hat{=} f$ corresponding
congruent

$c \hat{=} e$ alternate interior
congruent

$d \hat{=} e$ same-side
supplemental



$$9x + 6 = 60$$

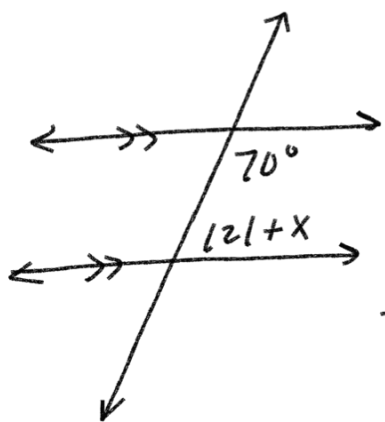
$$-6 \quad -6$$

$$9x = 54$$

$$\frac{9x}{9} = \frac{54}{9}$$

$$\boxed{x = 6}$$

1.)



Same-side

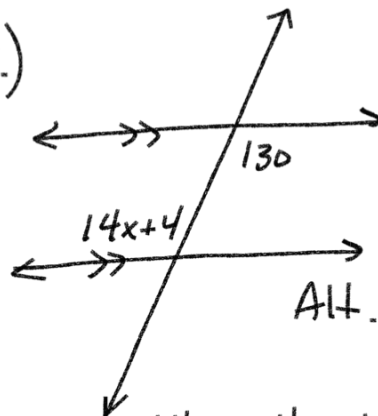
$$121 + x + 70 = 180^\circ$$

$$191 + x = 180^\circ$$

$$\begin{array}{r} -191 \\ -191 \end{array}$$

$$\boxed{x = -11}$$

2.)



Alt. Interior

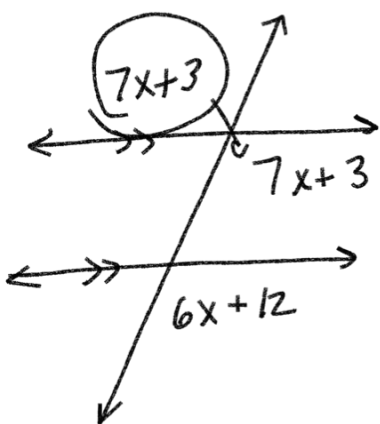
$$14x + 4 = 130$$

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

$$\frac{14x}{14} = \frac{126}{14}$$

$$\boxed{x = 9}$$

3.)



corresponding

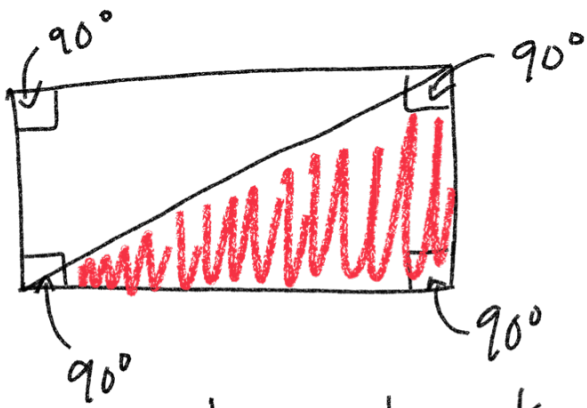
$$7x + 3 = 6x + 12$$

$$\begin{array}{r} -6x \\ -6x \end{array}$$

$$x + 3 = 12$$

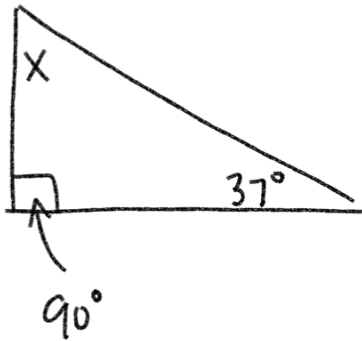
$$\begin{array}{r} -3 \\ -3 \end{array}$$

$$\boxed{x = 9}$$



Rectangle
 sum of the interior angles
 in a rectangle = 360°

triangle - $\frac{1}{2}$ rectangle
 sum of interior angles
 in a triangle = 180°

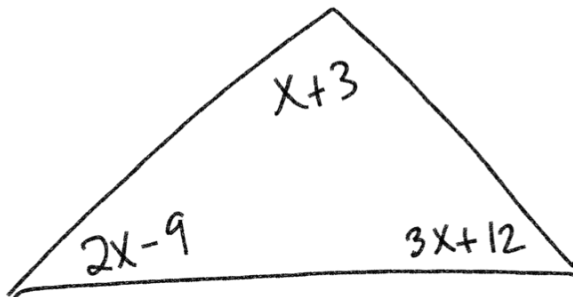
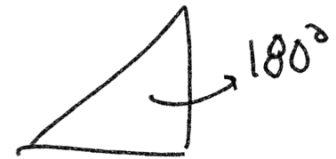


$$37 + 90 + X = 180$$

$$127 + X = 180$$

$$-127 \quad -127$$

$$\boxed{X = 53}$$



Not drawn to scale

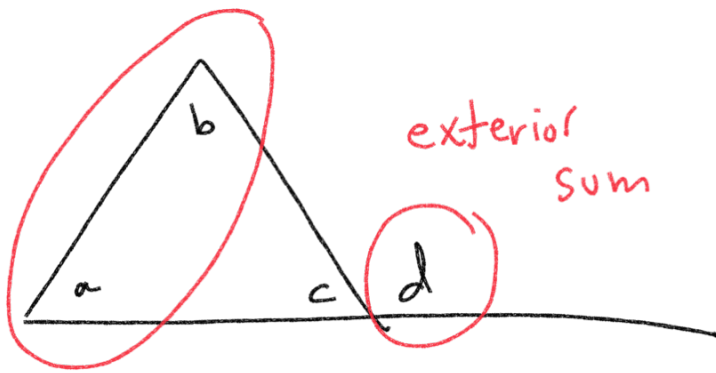
$$2X - 9 + 3X + 12 + X + 3 = 180$$

$$6X + 6 = 180$$

$$-6 \quad -6$$

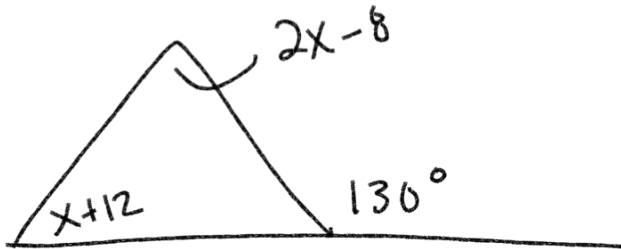
$$\frac{6X}{6} = \frac{174}{6}$$

$$\boxed{X = 29}$$



$$\begin{aligned} a + b + c &= 180 \\ d + c &= 180^\circ \end{aligned}$$

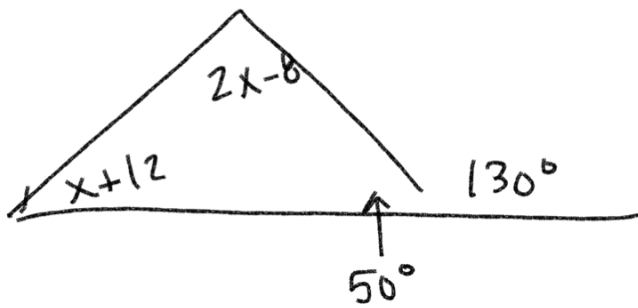
$$a + b = d$$



$$x + 12 + 2x - 8 = 130$$

$$\begin{aligned} 3x + 4 &= 130 \\ -4 &\quad -4 \end{aligned}$$

$$\frac{3x}{3} = \frac{126}{3} \quad \boxed{x = 42}$$



$$x + 12 + 2x - 8 + 50 = 180$$

$$\begin{aligned} 3x + 54 &= 180 \\ -54 &\quad -54 \end{aligned}$$

$$\frac{3x}{3} = \frac{126}{3} \quad \boxed{x = 42}$$