

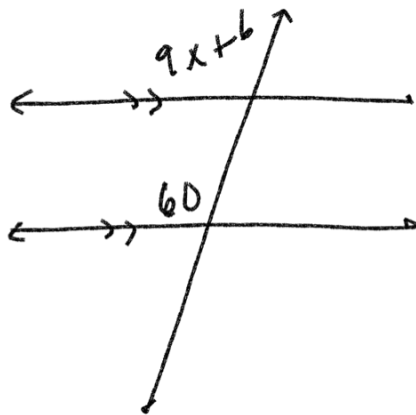
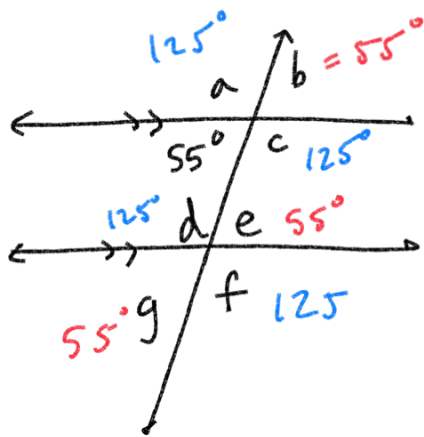
$a \hat{=} b$ linear pair
supplemental

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

$b \hat{=} f$ corresponding
angles
congruent

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

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

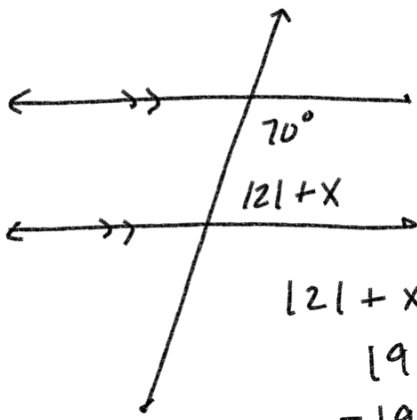


$$\begin{array}{r} 9x + 6 = 60 \\ -6 \quad -6 \end{array}$$

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

$$\boxed{x = 6}$$

1.)

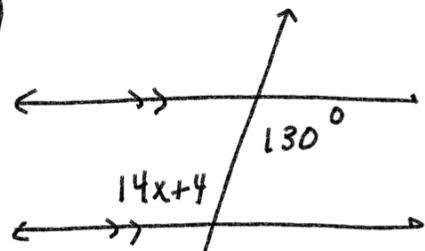


same-side

$$\begin{aligned} 121 + x + 70 &= 180 \\ 191 + x &= 180 \\ -191 & \quad -191 \end{aligned}$$

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

2.)



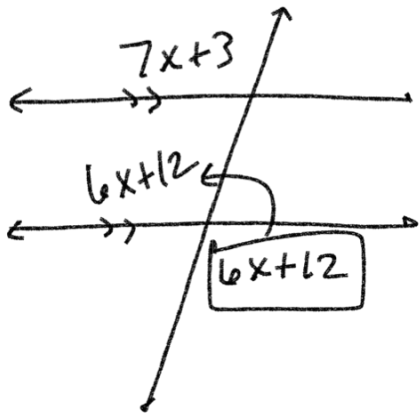
Alt. interior

$$\begin{aligned} 14x + 4 &= 130 \\ -4 & \quad -4 \end{aligned}$$

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

$$\boxed{x = 9}$$

3.)

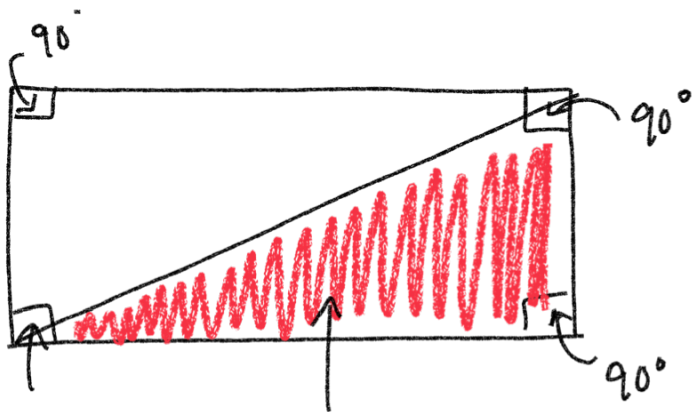


corresponding

$$\begin{aligned} 7x + 3 &= 6x + 12 \\ -6x & \quad -6x \end{aligned}$$

$$\begin{aligned} x + 3 &= 12 \\ -3 & \quad -3 \end{aligned}$$

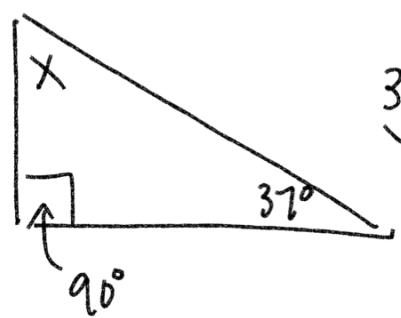
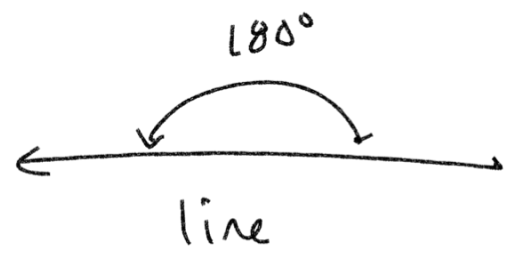
$$\boxed{x = 9}$$



triangle $\rightarrow \frac{1}{2}$ rectangle
 sum of interior angles
 in a triangle $= 180^\circ$

Rectangle

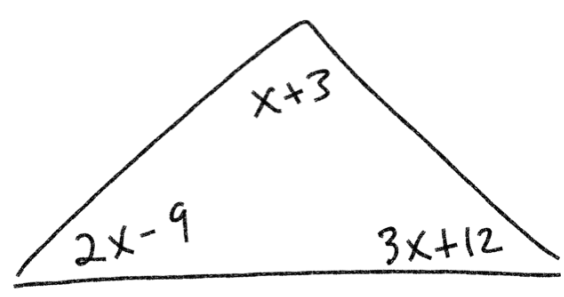
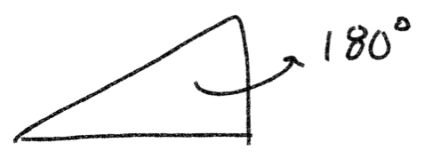
sum of all interior
 angles in a
 rectangle $= 360^\circ$



$$37 + 90 + X = 180^\circ$$

$$127 + X = 180^\circ$$

$$\begin{array}{r} -127 \quad -127 \\ \hline X = 53 \end{array}$$

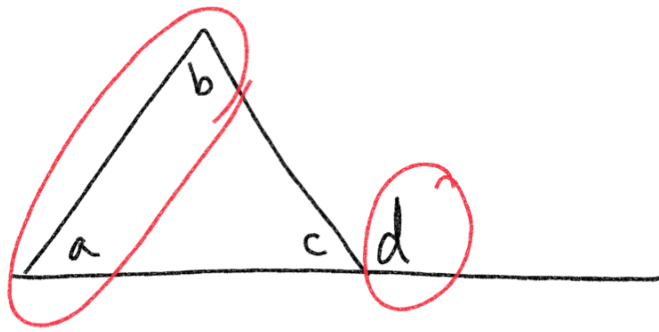


$$2x - 9 + x + 3 + 3x + 12 = 180^\circ$$

$$6x + 6 = 180^\circ$$

$$\begin{array}{r} -6 \quad -6 \\ \hline 6x = 174 \\ \hline 6 \quad 6 \end{array}$$

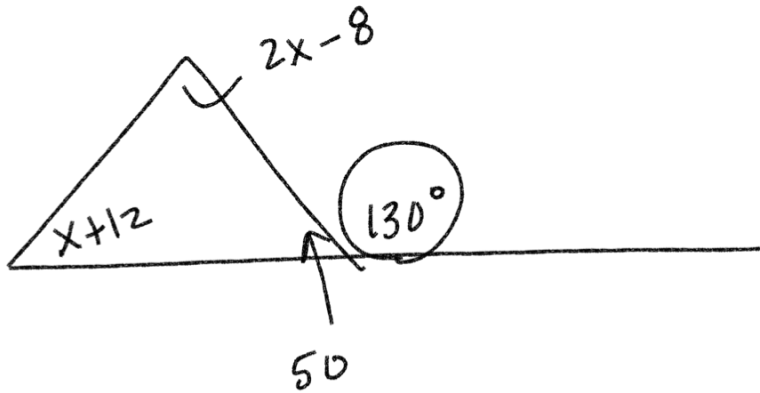
$$X = 29$$



$$a + b + c = 180^\circ$$

$$d + c = 180^\circ$$

$$a + b = d$$



$$x + 12 + 2x - 8 = 130^\circ$$

$$3x + 4 = 130^\circ$$

$$-4 \quad -4$$

$$\frac{3x}{3} = \frac{126}{3}$$

$$x = 42$$

$$x + 12 + 2x - 8 + 50 = 180^\circ$$

$$3x + 54 = 180^\circ$$

$$-54 \quad -54$$

$$\frac{3x}{3} = \frac{126}{3}$$

$$x = 42$$