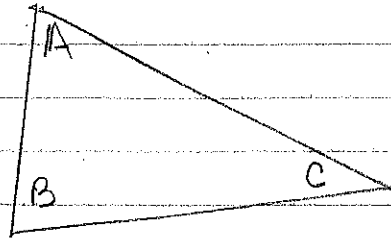
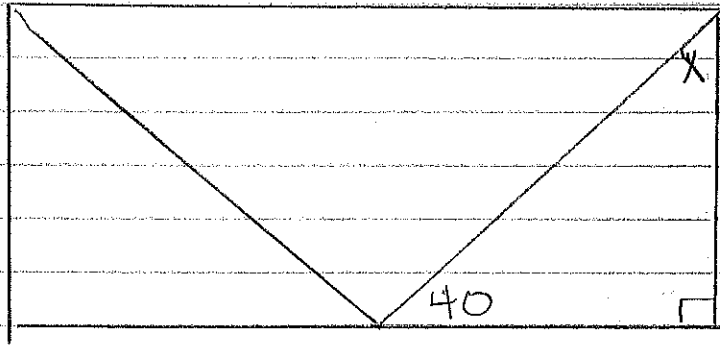


5.3 Angles of Triangles



Sum of the angles of a triangle = 180

$$\angle A + \angle B + \angle C = 180$$

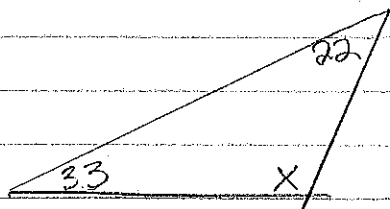


$$40 + 90 + x = 180$$

$$130 + x = 180$$

$$\underline{-130} \quad = 50$$

$$x = 50$$



$$33 + 22 = 55$$

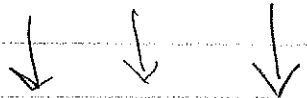
$$\begin{array}{r} 71 \\ 180 \end{array}$$

$$\underline{-55}$$

$$x = 125$$

Triangle Ratios

$$1 : 4 : 5$$



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

$$\frac{10x}{10} = \frac{180}{10}$$

$$x = 18$$

$$x = 18$$

$$4x = 72$$

$$5x = 90$$

$$1 : 2 : 3$$

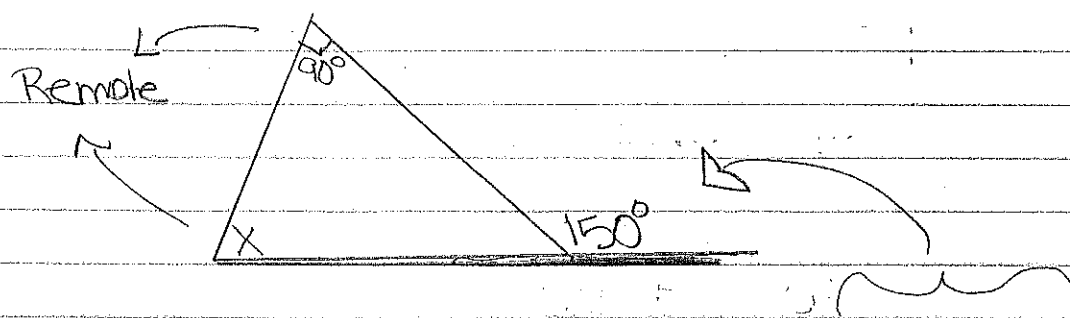
$$x + 2x + 3x = 18$$

$$x = 30$$

$$2x = 60$$

$$3x = 90$$

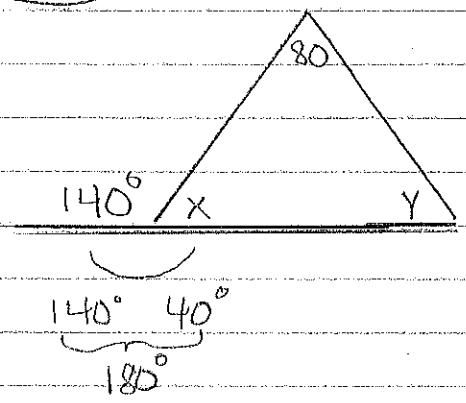
Remote Interior Angles



The degrees of an exterior angle is equal to the sum of the degrees of its 2 remote interior ^(plus) angles.

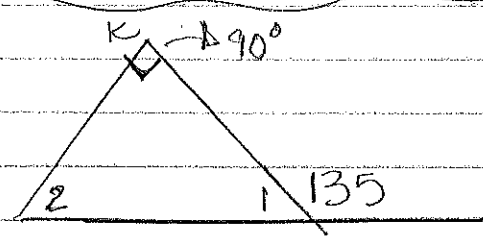
$$\begin{aligned}
 X + 90 &= 150 & X + 90 &= 150 \\
 & & &= -90 \\
 \hline
 X &= 60
 \end{aligned}$$

another way to solve it



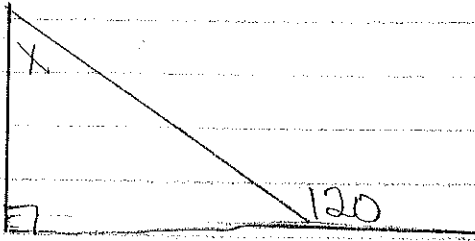
$$\begin{aligned}
 80 + Y &= 140 \\
 -80 &= -80 \\
 \hline
 Y &= 60
 \end{aligned}$$

ex.

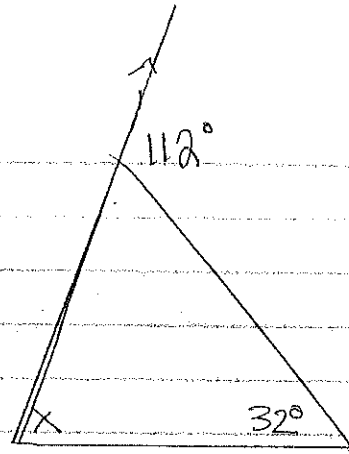


$$\begin{aligned}
 135 &= \angle 2 + 90 \\
 135 &= X + 90 \\
 -90 &= -90 \\
 \hline
 45 &= X
 \end{aligned}$$

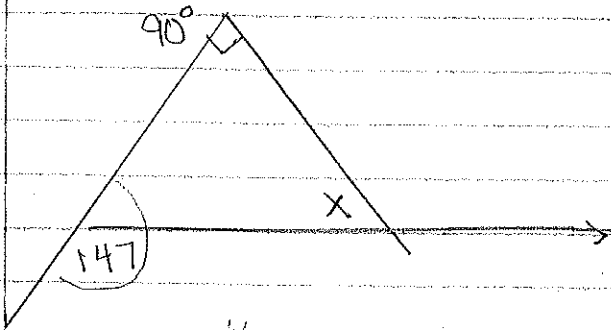
examples



$$\begin{array}{r} 90 + x = 120 \\ -90 \quad = -90 \\ \hline x = 30 \end{array}$$



$$\begin{array}{r} 32 + x = 112 \\ -32 \quad = -32 \\ \hline x = 80 \end{array}$$



$$\begin{array}{r} 90 + x = 147 \\ -90 \quad = -90 \\ \hline x = 57 \end{array}$$