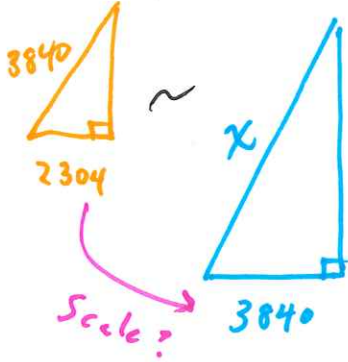
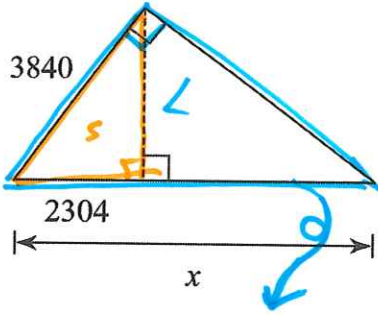


SRT-B4

1. Find the value of x .



$$\frac{3840}{2304} = 1.\bar{6} \text{ (or } \frac{5}{3})$$

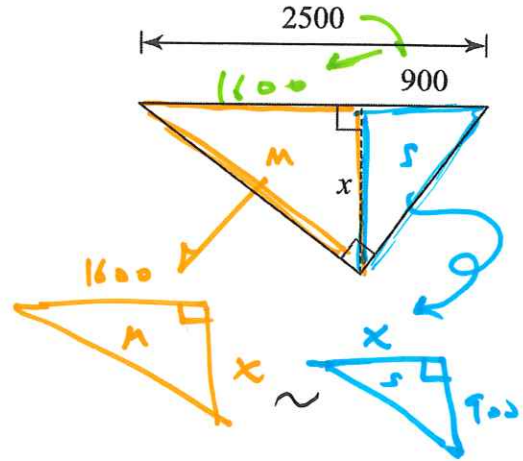
$$3840 \times 1.\bar{6} = \boxed{6400}$$

$$\begin{array}{r} 3840 \\ \times x \\ \hline \end{array} \text{ or } \begin{array}{r} 2304 \\ \times 3840 \\ \hline \end{array}$$

$$\begin{array}{r} 2304x = 14,745,600 \\ \div 2304 \quad \div 2304 \end{array}$$

$$\underline{x = 6400}$$

2. Find the value of x .



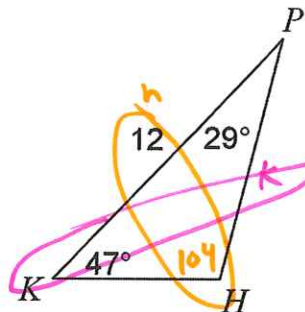
Can't use scale factor!
So, use Proportions.

$$\frac{1600}{x} = \frac{x}{900}$$

$$x^2 = 1,440,000$$

$$\boxed{x = 1200}$$

3. Find the length of \overline{HP} to the nearest integer.



Law of Sines?
Not at first...
But!
 $\angle H$ is easy to find!
 $180^\circ - 47^\circ - 29^\circ = 104^\circ$

Now I can use Law of Sines.

$$\frac{\sin 104}{12} \times \frac{\sin 47}{k}$$

$$k \cdot \sin 104 = 12 \cdot \sin 47$$

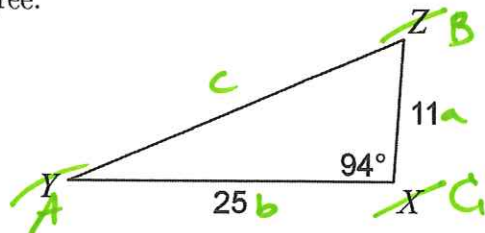
$$k = \frac{12 \cdot \sin 47}{\sin 104}$$

$$k = \frac{9.04}{\approx} \boxed{HP \approx 9}$$

9

Whole Number

4. Find the measure of $\angle Y$ to the nearest degree.



Law of Sines...? No...
Must use Law of Cosines.

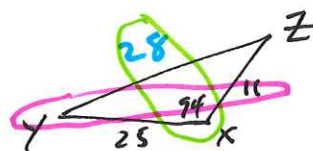
$$c^2 = b^2 + a^2 - 2ab \cdot \cos C$$

$$c^2 = 25^2 + 11^2 - 2(11)(25) \cos(94^\circ)$$

$$c^2 = 784.366$$

$$c \approx 28$$

Still need $\angle Y$... updated picture!



Key! Now I can use Law of Sines!

$$\frac{\sin 94}{28} \times \frac{\sin Y}{11}$$

$$11 \cdot \sin 94 = 28 \cdot \sin Y$$

$$\frac{11 \sin 94}{28} = \sin Y$$

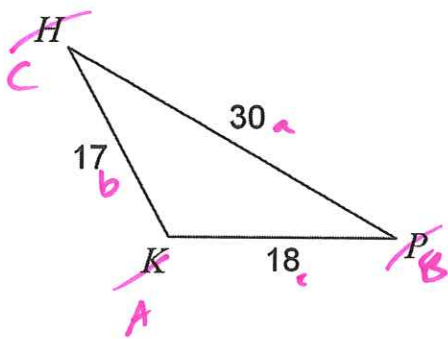
$$0.392 = \sin Y$$

INVERT

$$Y = \sin^{-1}(0.392) \approx \boxed{23^\circ}$$

23

5. Find the measure of $\angle H$ to the nearest degree.



Law of Sines? No Angles for making a pair... $\ddot{\smile}$

Must use Law of Cosines.

→ Call desired Angle "C"

$$c^2 = b^2 + a^2 - 2ab \cdot \cos C$$

$$\underline{18^2} = \underline{17^2 + 30^2} - \underline{2(30)(17)} \cos C$$

$$324 = 1189 - 1020 \cos C$$

$$\underline{-1189}$$

$$\underline{-1189}$$

DO NOT COMBINE THESE! UNLIKE TERMS

$$\underline{-865} = \underline{-1020 \cdot \cos C}$$

$$0.848 = \cos C$$

I N V E R T

$$C = \cos^{-1}(0.848)$$

$$\boxed{\approx 32^\circ}$$