

Assignments

* 9.6 Extra Practice worksheet, #1-20
(20 points) *One Note*

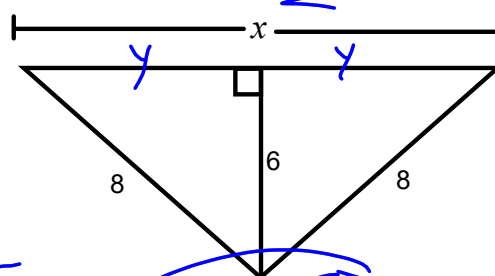
* Applications worksheet (30 points)

* You can continue working on the Review Guide. We will be submitting that **next week**.

Last Tuesday's Warm-up

Find the length of x . Simplify.

No rounded decimals.



$$y^2 + 6^2 = 8^2$$

$$y^2 + 36 = 64$$

$$y^2 = 28$$

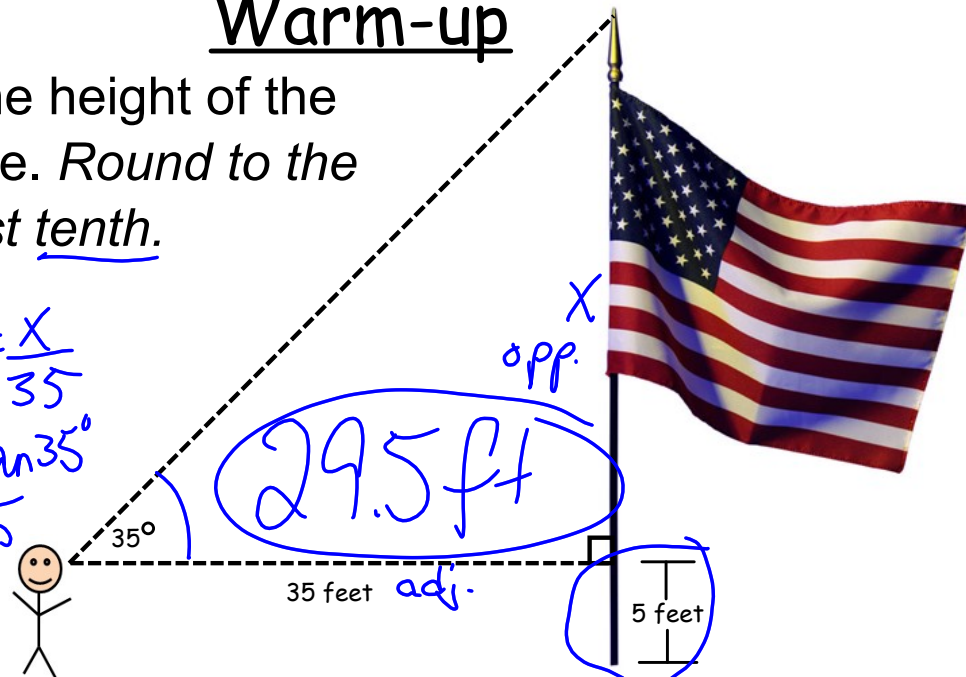
$$y = \sqrt{28} = \sqrt{4 \cdot 7} = 2\sqrt{7}$$

$$x = 4\sqrt{7}$$

Warm-up

Find the height of the flagpole. Round to the nearest tenth.

$$\begin{aligned} \text{to a} \\ \tan 35^\circ &= \frac{X}{35} \\ X &= 35 \cdot \tan 35^\circ \\ X &= 24.5 \end{aligned}$$



Solving Right Triangles

9.6

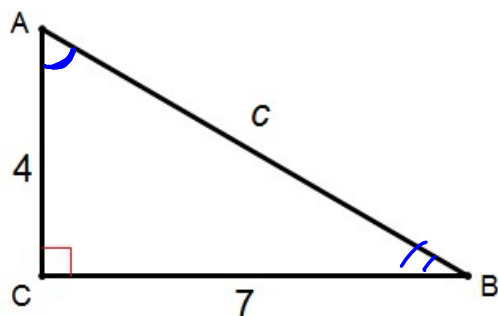
★ *To solve a triangle:*

→ find every side length.

→ find every angle measure.

★ *Unless otherwise directed, round any side length to the nearest tenth and any angle to the nearest degree.*

ex: Solve $\triangle ABC$:



$\star A = 60^\circ$	$a = 7$
$B = 30^\circ$	$b = 4$
$C = 90^\circ$	$c = 8.1$

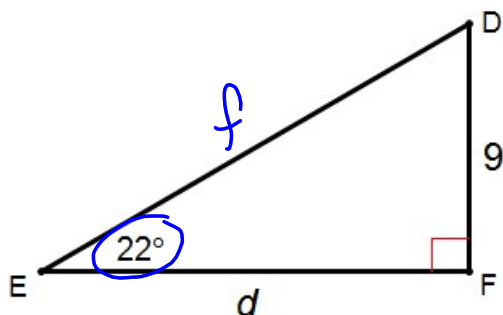
$$7^2 + 4^2 = c^2 \quad \tan A = \frac{7}{4} \quad \tan B = \frac{4}{7}$$

$$49 + 16 = c^2 \quad A = \tan^{-1}\left(\frac{7}{4}\right) \quad B = \tan^{-1}\left(\frac{4}{7}\right)$$

$$c^2 = 65$$

$$c = \sqrt{65}$$

ex: Solve $\triangle DEF$:



$$D = 68^\circ \quad d = 22.3$$

$$E = 22^\circ \quad e = 9$$

$$F = 90^\circ \quad f = 24.0$$

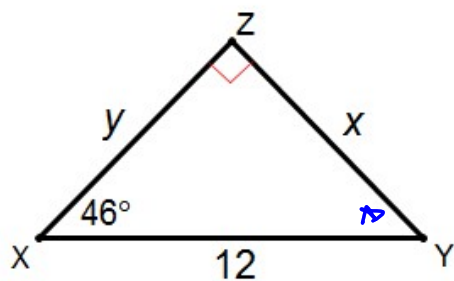
$$d \cdot \frac{\tan 22^\circ}{\tan 22^\circ} = \frac{9}{\cancel{d} \cdot \tan 22^\circ}$$

$$d = \left(\frac{9}{\tan 22^\circ} \right)$$

$$\sin 22^\circ = \frac{9}{f}$$

$$f = \left(\frac{9}{\sin 22^\circ} \right)$$

ex: Solve $\triangle XYZ$:



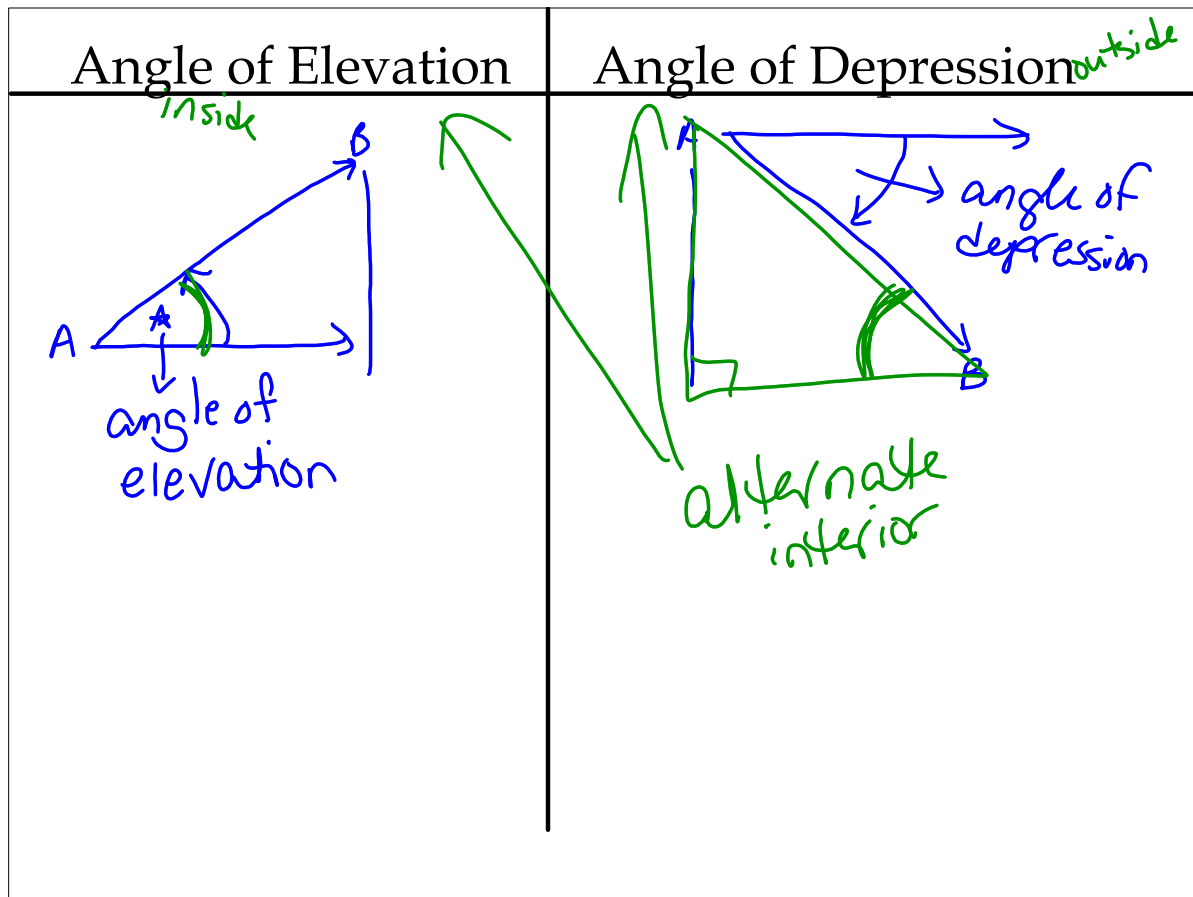
$$X = 46^\circ \quad x = 8.6$$

$$Y = 44^\circ \quad y = 8.3$$

$$Z = 90^\circ \quad z = 12$$

$$\sin 46^\circ = \frac{x}{12} \quad \cos 46^\circ = \frac{y}{12}$$

$$x = 12 \cdot \sin 46^\circ \quad y = 12 \cdot \cos 46^\circ$$



Assignments

- * 9.6 Extra Practice worksheet, #1-20 (20 points)
- * Applications worksheet (30 points) ^{by Friday One Note}
- * 3rd MP IXLs: P2, P3, P4, P7, P10, PNew, Q1
(5 points each)
- * Chapter 9 Review Guide ^{→ next week}