

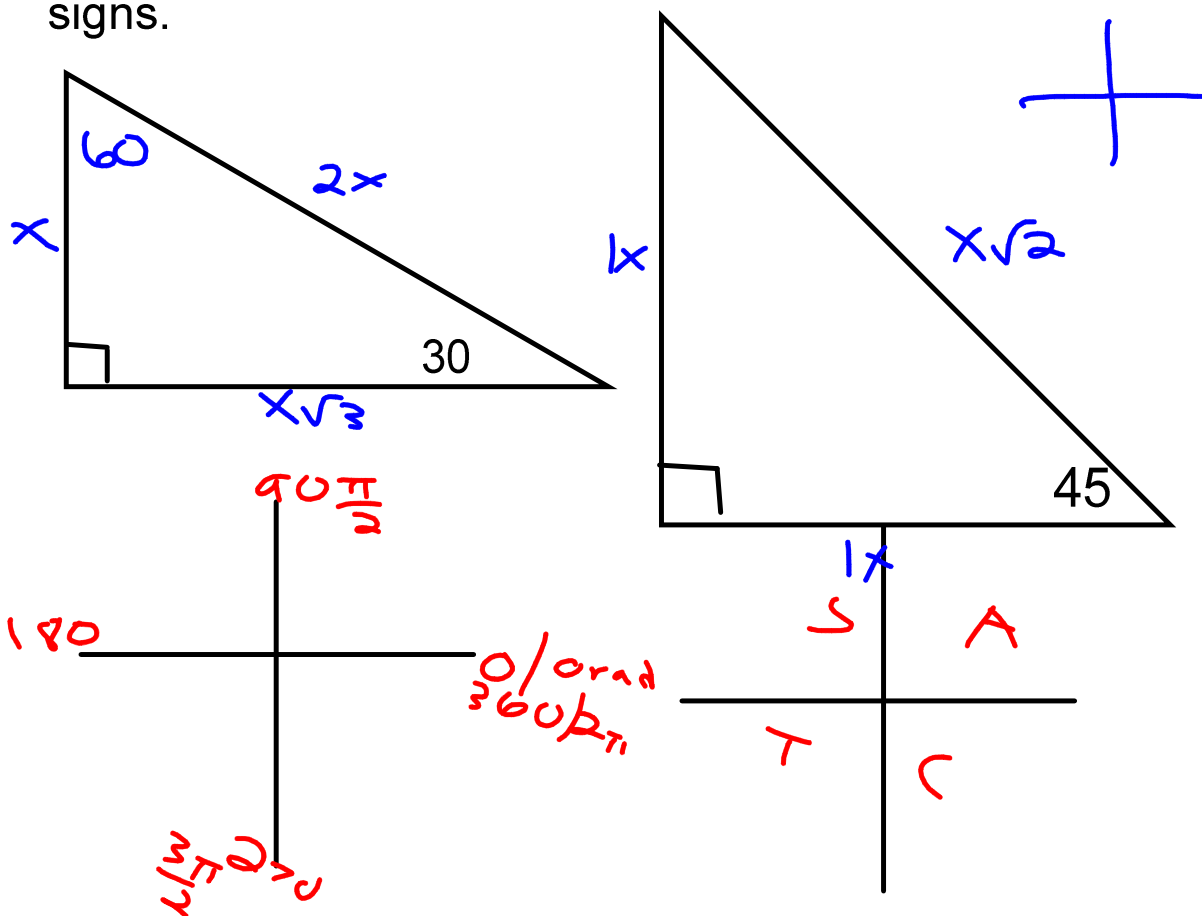
Warm Up

*Trig Table Quiz

-No you cannot use your purple unit circle, but you can draw one of the back of this quiz.

Warm-up

1.) Draw the special right triangles, quadrantals, and trig. signs.



Radian and Degrees on the unit circle

Review

$$1) \sin x \cos^2 x - 2 \sin x \cos x + \sin x = 0$$

$$\sin x \left(\overset{x^2 - 2x + 1}{\cos^2 x - 2 \cos x + 1} \right) = 0$$

$$(-x-1)(-x-1)$$

$$\sin x (\cos x - 1)(\cos x - 1) = 0$$

$$\sin x = 0$$

$$0^\circ, 180^\circ$$

$$0 + 2n\pi \quad \pi + 2n\pi$$

$$\cos x - 1 = 0$$

$$\cos x = 1$$

$$0^\circ$$

$$0 + 2n\pi$$

$$0 < x < 2\pi$$

General Solution

$$\textcircled{13} 2\sin^2 x + \sin x = 0$$

 $\textcircled{26}$

$$\sin x (2\sin x + 1) = 0$$

$$\sin x = 0$$

$0^\circ, 180^\circ$

$$2\sin x + 1 = 0$$

$$\sin x = -\frac{1}{2}$$

$210^\circ, 330^\circ$

S	A
+	-

$$\textcircled{17} \quad \sqrt{3} \csc x - 2 = 0$$

$$\frac{\sqrt{3}}{\sqrt{3}} \csc x = \frac{2}{\sqrt{3}}$$

$$\csc x = \frac{2}{\sqrt{3}}$$

$$60^\circ \quad \sin x = \frac{\sqrt{3}}{2}$$

120°

$$\textcircled{26} \quad 2\sqrt{3} \tan x - 3 \tan x \csc x = 0$$

$$\tan x (2\sqrt{3} - 3 \csc x) = 0$$

$$\tan x = 0$$

$$180^\circ$$

$$360^\circ$$

$$2\sqrt{3} - 3 \csc x = 0$$

$$-2\sqrt{3}$$

$$-2\sqrt{3}$$

$$\frac{-3 \csc x}{-3} = \frac{-2\sqrt{3}}{-3}$$

$$\csc x = \frac{2\sqrt{3}}{3}$$

$$\sin x = \frac{3 \cdot \sqrt{3}}{2\sqrt{3} \cdot \sqrt{3}}$$

$$60^\circ, 120^\circ$$

$$\sin x = \frac{2 \cdot \sqrt{3}}{2\sqrt{3} \cdot \sqrt{3}}$$

$$\tan x = \frac{\sin 30}{\cos 30} = \frac{1}{\sqrt{3}}$$

with $\frac{1}{\sqrt{3}}$ $\frac{\sqrt{3}}{3}$

$$\frac{\sin 60}{\cos 60} = \frac{\frac{\sqrt{3}}{2}}{\frac{1}{2}} = \sqrt{3}$$

$$\csc x = \frac{1}{\sin x}$$

Homework Questions

*Solving questions?

Speed Dating

9.) $7 + \cos(x) = 4 - 5\cos(x)$

10.) $-5 - 2\cos(x) = -2 + \cos(x)$



Solving DLT

Bonus

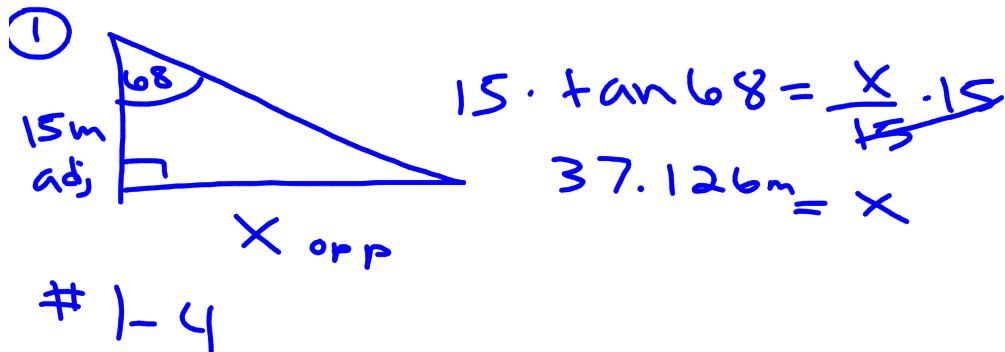
Which angle is coterminal with an angle of 45° ?

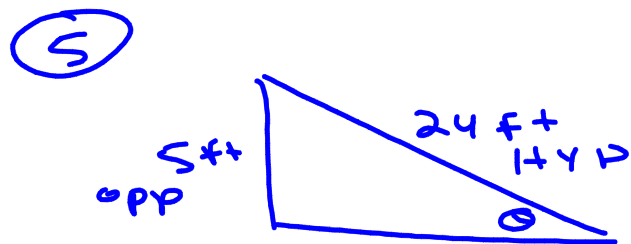
- A) 90° B) 225° C) 315° D) 405°

<https://quizizz.com/admin/quiz/5af44a39cb3e38001a3e49ba/evaluating-trig-functions>

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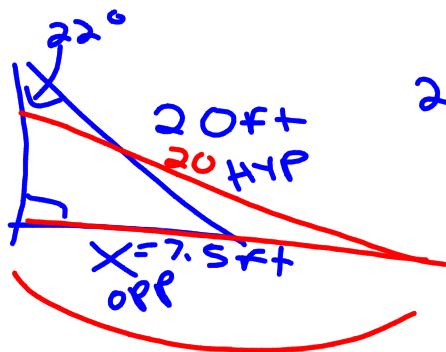
Word Problem WS





$$\sin^{-1}\left(\frac{5}{24}\right) = 12^\circ$$

7



$$x^2 + 10.5^2 = 20^2$$

$$x = 17$$

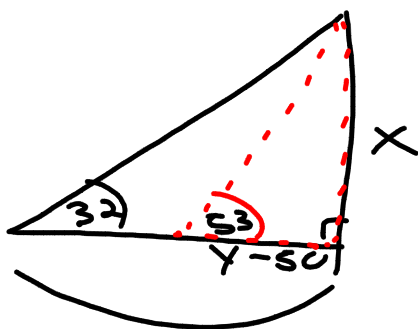
$$20 \cdot \sin 22 = \frac{x}{20} \cdot 20$$

$$7.5 \text{ ft} = x$$

$$x^2 + 7.5^2 = 20^2$$

$$x = 18.5$$

1.5 ft



$$y \cdot \tan 32 = \frac{x}{y} \cdot \tan 53 = \frac{x \cdot 50}{y - 50}$$

$$\underline{y \cdot \tan 32 = x} \quad \underline{(y - 50) \tan 53 = x}$$

$$y \tan 32 = (y - 50) \tan 53$$

$$y \tan 32 = y \tan 53 - 50 \tan 53$$

$$-y \tan 53 - y \tan 53$$

$$y \tan 32 - y \tan 53 = -50 \tan 53$$

$$y (\tan 32 - \tan 53) = -50 \tan 53$$

$$\underline{y \cdot (-.7022) = -66.3522}$$

$$\underline{-.7022} \quad \underline{-.7022}$$

$$y = 94.4919$$

$$94.4919$$

$$\tan 32 = \frac{x}{94.4919}$$

$$x = 59.0451$$

<https://quizizz.com/admin/quiz/5c3e20a16383af001b37d9cf/unit-circle-evaluating-trig>

Review

1) Easy

Ex: $2 \cos x - \sqrt{3} = 0$

2) Two Different Trig  Factor One Out

Ex: $\sin x \cos x + \sin x = 0$

3) Squared Trig Function  Square Root

Ex: $4 \sin^2 x - 1 = 0$

Creates + -

4) Factorable



Need two numbers
to add to "b"

Ex: $\sin^2 x - \sin x - 1 = 0$

Ex: $2 \sin^2 x - \sin x - 1 = 0$

multiply to "c"

 Factor by Grouping

<https://quizizz.com/admin/quiz/5b07075839ecff001ad8ff0d/evaluating-trigonometric-functions>

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Word Problems

pg 858# 36

pg 871 # 35

Challenge Word Problem

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HW:

-Word Problem ws

-Review ws