

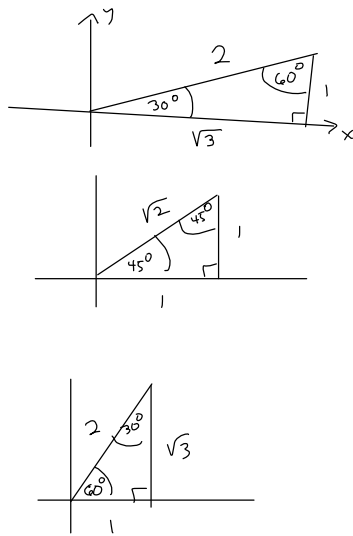
<https://harryzaims.com/> Video and written resources covering the homework exercises.

<https://www.vitalsource.com/> is my source for eBook.

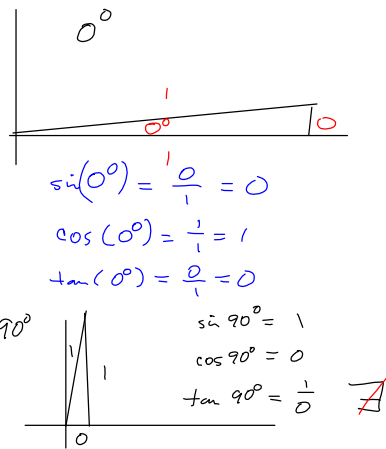
There is a free eBook included with the REQUIRED WebAssign registration.

12-point unit circle?

I'm ambivalent about Section 1.2.



DEGENERATE TRIANGLES



$$\sin(0^\circ) = \frac{0}{1} = 0$$

$$\cos(0^\circ) = \frac{1}{1} = 1$$

$$\tan(0^\circ) = \frac{0}{1} = 0$$

90°

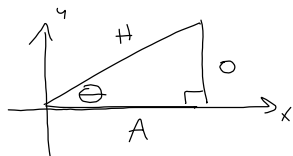
$$\sin 90^\circ = 1$$

$$\cos 90^\circ = 0$$

$$\tan 90^\circ = \frac{1}{0} \quad \text{[X]}$$

SOHCAHTOA mnemonic

Right-angle trig:



$\theta = \text{THETA}$

Sine

O = opposite side

cosine

A = adjacent side

tangent

H = Hypotenuse.

$\sin(\theta)$

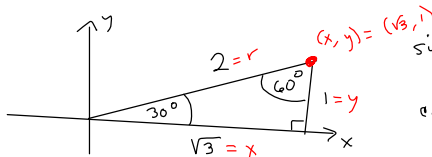
$\theta = \text{argument (input) to sine.}$

$\frac{y_2 - y_1}{x_2 - x_1} = \frac{y_2}{x_2}$ when $x_1 = y_1 = 0$.

$\sin \theta = \frac{o}{H} = \frac{y}{r}$ SOH

$\cos \theta = \frac{A}{H} = \frac{x}{r}$ COH

$\tan \theta = \text{slope!} = \frac{o}{A} = \frac{y}{x}$ TOA



$\sin(30^\circ) = \frac{1}{2}$

$\cos(30^\circ) = \frac{\sqrt{3}}{2}$

$\tan(30^\circ) = \frac{1}{\sqrt{3}}$

$\sin\left(\frac{\pi}{6}(x-5)\right)$ PARENTHESES

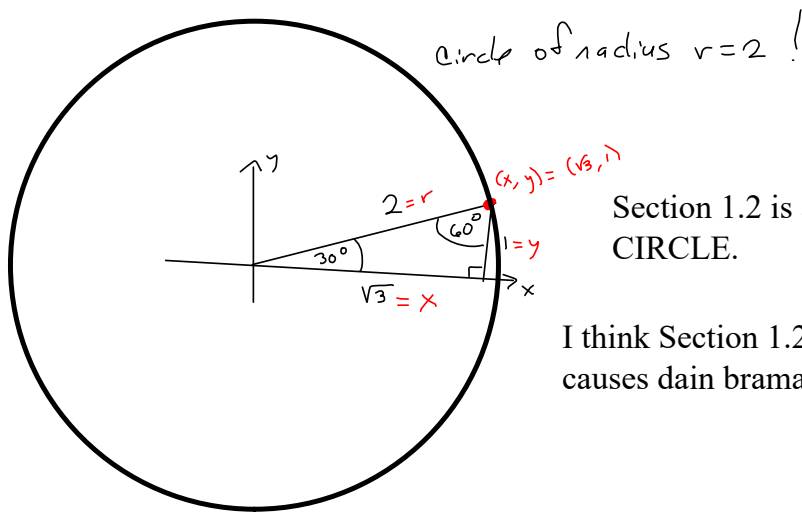
$\sin\left(\frac{\pi}{6}x - \frac{5\pi}{6}\right)$
 $\sin\left(\frac{\pi}{6}x - \frac{5\pi}{6}\right) = \text{BAD}$

$\frac{1}{\sqrt{3}}$ is fine for written work, unless otherwise specified

by me.

But WebAssign will frown on $\frac{1}{\sqrt{3}}$, so do your "rationalize the denominator" thing:

$\frac{1}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{\sqrt{3}}{3}$



circle of radius $r=2$!

$(x, y) = (\sqrt{3}, 1)$

Section 1.2 is all about the UNIT CIRCLE.

I think Section 1.2 too early causes dain bramage!