

Test 2 curve:

A - 85 - 100

B - 75 - 84

C - 60 - 75

D - 50 - 59

Main thing I'm looking for is an embrace of the techniques and an upward trajectory. If you're hovering around 50% or below, you probably want to withdraw.

Questions? You may ask from the floor or come up, individually.

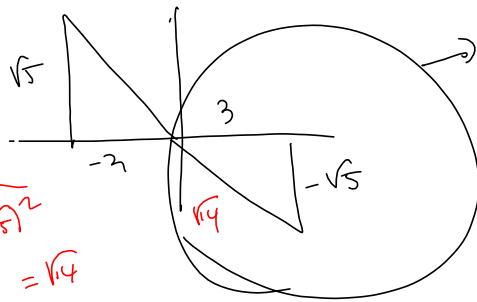
This class's main weakness is mechanics of arithmetic, pre-algebra and basic algebra skills. Most are picking up the trig, just fine, but most also have big holes in their foundation, making much of this very difficult, even though you're grokking the Trig just fine.

$$\begin{aligned} \sqrt{\frac{1 + \frac{3}{\sqrt{14}}}{2}} &= \sqrt{\frac{\frac{\sqrt{14} + 3}{\sqrt{14}}}{2}} = \sqrt{\frac{\sqrt{14} + 3}{2\sqrt{14}}} \quad \text{etc.} \\ &= \sqrt{\left(\frac{\sqrt{14} + 3}{2\sqrt{14}}\right) \left(\frac{\sqrt{14}}{\sqrt{14}}\right)} = \sqrt{\frac{14 + 3\sqrt{14}}{2 \cdot 14}} = \sqrt{\frac{14 + 3\sqrt{14}}{2 \cdot 2 \cdot 7}} \\ &= \sqrt{\left(\frac{14 + 3\sqrt{14}}{2 \cdot 2 \cdot 7}\right) \left(\frac{7}{7}\right)} = \frac{\sqrt{98 + 21\sqrt{14}}}{\sqrt{2 \cdot 2 \cdot 7 \cdot 7}} = \frac{\sqrt{98 + 21\sqrt{14}}}{2 \cdot 7} \\ &= \frac{\sqrt{98 + 21\sqrt{14}}}{14} \quad \text{is simplified radical form.} \end{aligned}$$

$$\begin{aligned} \frac{1}{2 + \sqrt{5}} &= \left(\frac{1}{2 + \sqrt{5}}\right) \left(\frac{2 - \sqrt{5}}{2 - \sqrt{5}}\right) \\ &= \frac{2 - \sqrt{5}}{2^2 - (\sqrt{5})^2} = \frac{2 - \sqrt{5}}{4 - 5} = \frac{2 - \sqrt{5}}{-1} = \sqrt{5} - 2 \end{aligned}$$

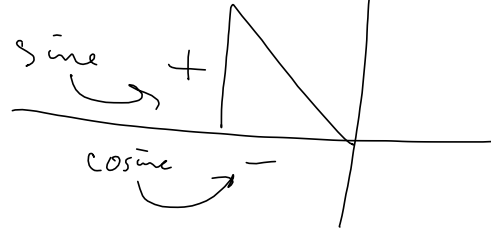
This pre-algebra stuff and quadratic equations are killin' people.

$$\tan \theta = -\frac{\sqrt{5}}{3} \text{ and } \cos \theta > 0$$



$$\sqrt{3^2 + (-\sqrt{5})^2} = \sqrt{9+5} = \sqrt{14}$$

This one is  $\cos \theta > 0$   
 so  $\frac{3\pi}{2} < \theta < 2\pi$   
 $\Rightarrow \frac{3\pi}{4} < \frac{\theta}{2} < \pi$   
 $\Rightarrow \frac{\theta}{2} \in \text{Q II}$



$$\sin\left(\frac{\theta}{2}\right) = \pm \sqrt{\frac{1 - \cos(\theta)}{2}}$$

$$= \sqrt{\frac{1 - \frac{3}{\sqrt{14}}}{2}} = \sqrt{\frac{\frac{\sqrt{14}}{\sqrt{14}} - \frac{3}{\sqrt{14}}}{2}}$$

$$= \sqrt{\frac{\frac{\sqrt{14}-3}{\sqrt{14}}}{2}} = \sqrt{\left(\frac{\sqrt{14}-3}{\sqrt{14}}\right)\left(\frac{1}{2}\right)}$$

$$= \sqrt{\frac{\sqrt{14}-3}{2\sqrt{14}}}$$

Now simplify inside.

$$\sqrt{\left(\frac{\sqrt{14}-3}{2\sqrt{14}}\right)\left(\frac{\sqrt{14}}{\sqrt{14}}\right)} = \sqrt{\frac{14-3\sqrt{14}}{2 \cdot 14}}$$

$$= \frac{\sqrt{14-3\sqrt{14}}}{\sqrt{2 \cdot 2 \cdot 7}} = \frac{\sqrt{14-3\sqrt{14}}}{2\sqrt{7}} = \left(\frac{\sqrt{14-3\sqrt{14}}}{2\sqrt{7}}\right)\left(\frac{\sqrt{7}}{\sqrt{7}}\right)$$

$$= \frac{\sqrt{(14-3\sqrt{14})(7)}}{2 \cdot 7} = \frac{\sqrt{98-21\sqrt{14}}}{14}$$