

Review Day #2 Final Review Answers:

#4 → continual compounding = $A = Pe^{rt}$

$$25,000 = 6000e^{.06t}$$

$$\div 6000$$

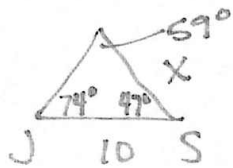
$$4.1\bar{6} = e^{.06t}$$

$$\ln(4.1\bar{6}) = .06t$$

$$1.427 = .06t \div .06$$

$$t = 23.79 \rightarrow \boxed{D}$$

#16



$$\frac{\sin 59^\circ}{10} = \frac{\sin 74^\circ}{x}$$

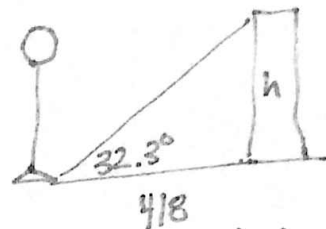
$$x \sin 59^\circ = 10 \sin 74^\circ$$

$$x \sin 59^\circ = 9.613$$

$$\leftarrow x = 11.2$$

\boxed{C}

#5



$$\tan 32.3^\circ = h/418$$

$$418 \tan 32.3^\circ = h$$

$$h = 264.25 \rightarrow \boxed{B}$$

#17 $y = \log_5(2x-1)$

$$5^y = 2x-1$$

$$5^y + 1 = 2x$$

$$\frac{5^y + 1}{2} = x$$

$$f^{-1}(x) = \frac{5^x + 1}{2} \rightarrow \boxed{B}$$

solve for x to undo

#21 $(\sec \theta) \left(\frac{\sin \theta}{\tan \theta} \right) = \frac{1}{\cos \theta} \cdot \frac{\sin \theta}{1} \div \frac{\sin \theta}{\cos \theta}$

$$= \frac{1}{\cos \theta} \cdot \frac{\sin \theta}{1} \cdot \frac{\cos \theta}{\sin \theta} = 1$$

$$\sin^2 x + \cos^2 x = 1$$

can't get

$$\sin^2 x - \cos^2 x$$

or

$$\cos^2 x - \sin^2 x$$

$$\cot^2 x + 1 = \csc^2 x$$

$$1 = \csc^2 x - \cot^2 x$$

\boxed{D}

#22. law of cosines!

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

$$c^2 = 28^2 + 46^2 - 2(28)(46) \cos 8$$

$$c^2 = 784 + 2116 - 447.32$$

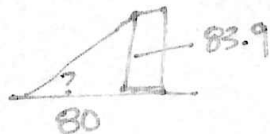
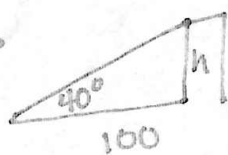
$$c^2 = 2452.57$$

$$c = 49.5 \text{ ft}$$

$$x \# 25 \text{ per ft} = \# 1238$$

\boxed{A}

#25



$$\tan 40^\circ = \frac{h}{100} \rightarrow h = 83.9$$

$$\tan x = \frac{83.9}{80} \rightarrow \tan x = 1.05$$

$$\tan^{-1}(1.05) = x = 46^\circ$$

\boxed{B}

#2 - FR

$$Pe^{rt} \quad r = -.0259$$

a. 2.59%

b. 1440 (initial value)