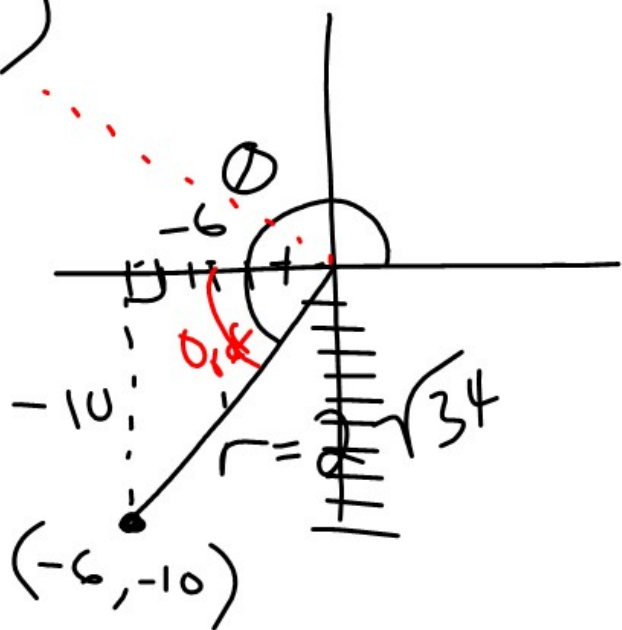


3)



$$a) \cos \theta = \frac{a}{r} = \frac{-6}{2\sqrt{34}}$$

$$= \frac{-3}{\sqrt{34}}$$

$$= \boxed{\frac{-3\sqrt{34}}{34}}$$

$$b) \sin \theta = \frac{-10}{2\sqrt{34}}$$

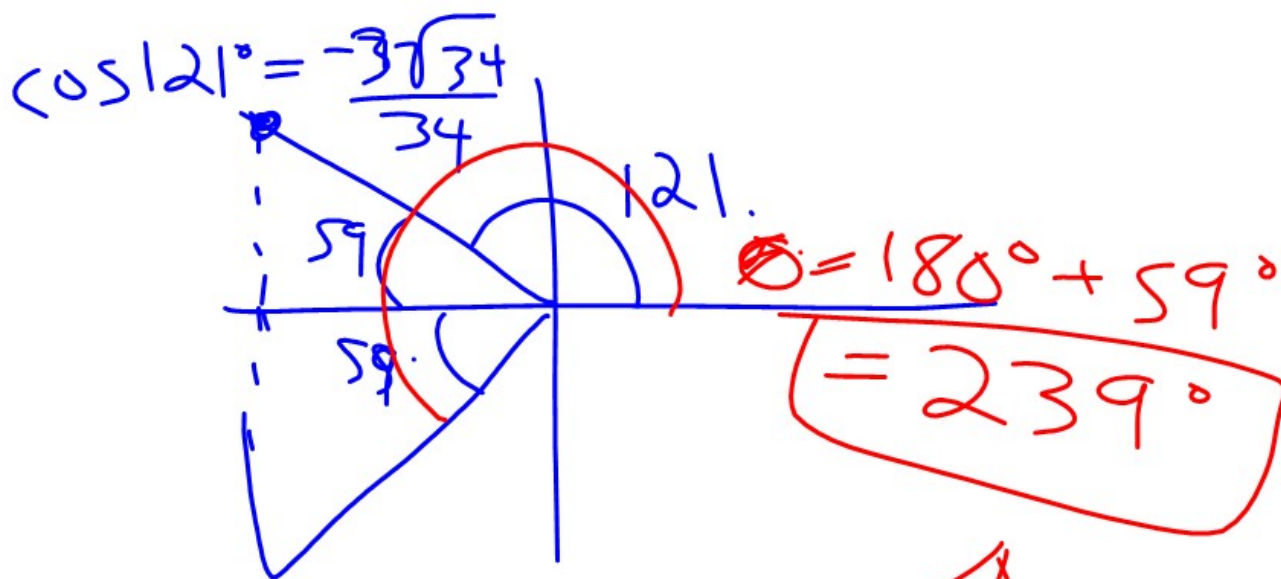
$$= \frac{-5}{\sqrt{34}} \quad \boxed{\frac{-5\sqrt{34}}{34}}$$

$$r = \sqrt{6^2 + 10^2} = \sqrt{136} = 2\sqrt{34}$$

$$\begin{array}{r} 68 \\ \times 2 \\ \hline 136 \\ \hline \end{array}$$

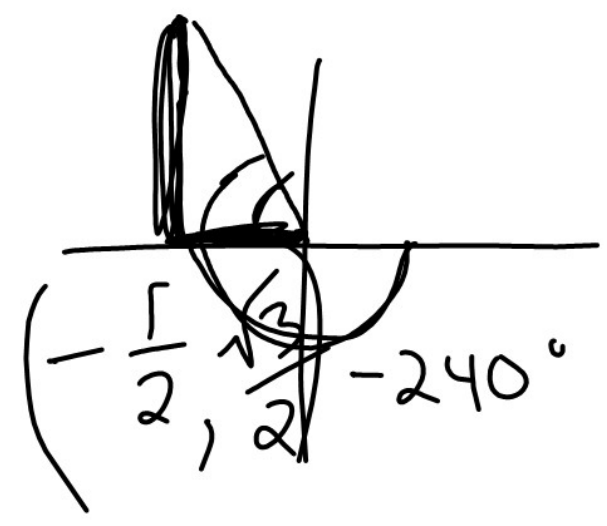
$$c) \theta = \cos^{-1}\left(\frac{-3\sqrt{34}}{34}\right)$$

$$\theta = 121.0^\circ$$

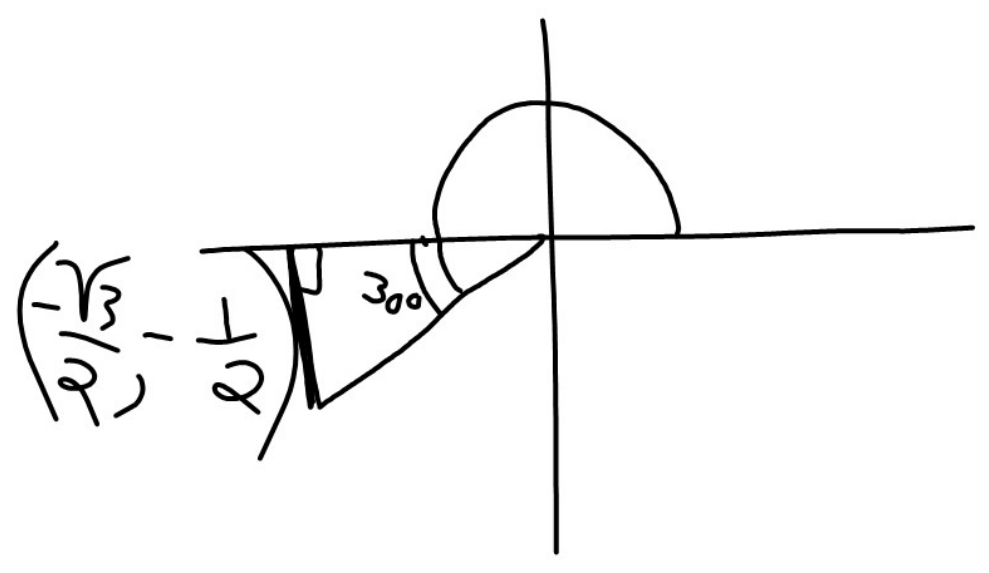
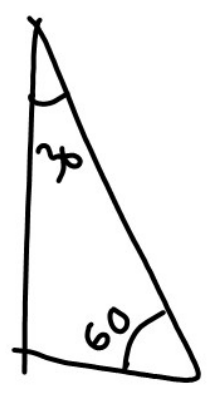


Careful; this was  
Wrong in my  
Key

4) a)  $\sin(-240^\circ)$   
 $= \frac{\sqrt{3}}{2}$



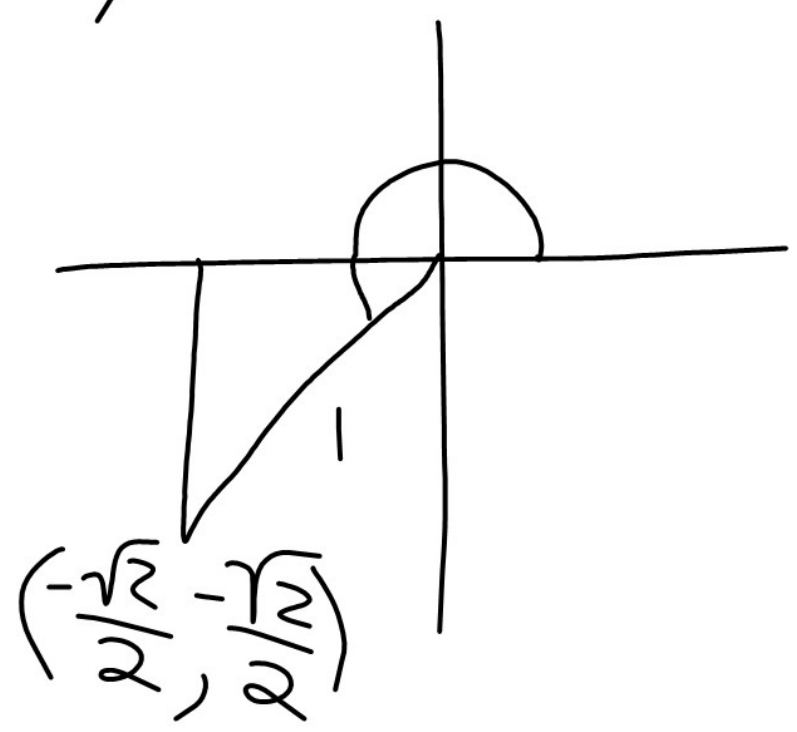
b)  $\tan 210^\circ$

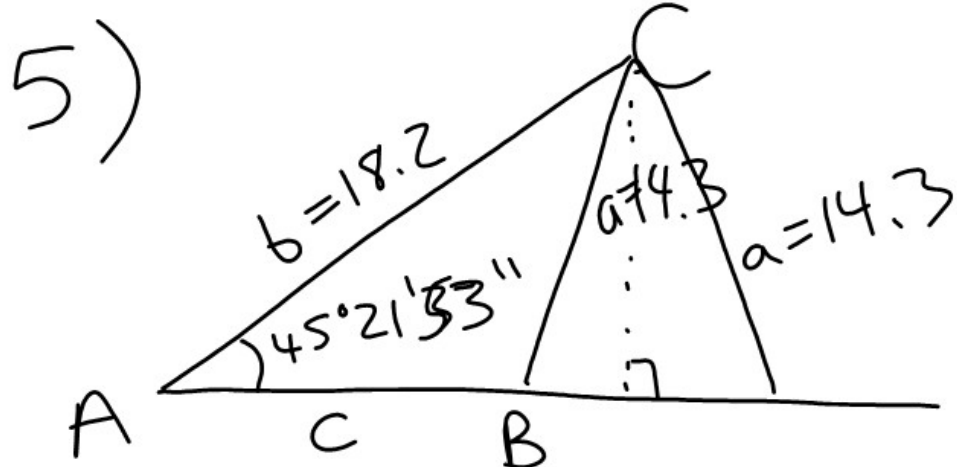


$\tan 210^\circ = \frac{\sin 210}{\cos 210} = \frac{-1/2}{-\sqrt{3}/2}$

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

c)  $\cos 225^\circ = -\frac{\sqrt{2}}{2}$





$$45^\circ 21' 53'' = 45.364722^\circ$$

$$\frac{\sin 45.361722}{14.3} = \frac{\sin B}{18.2}$$

$$B = \sin^{-1} \left( \frac{18.2 \sin 45.361722}{14.3} \right)$$

$$B = 64.9129^\circ$$

$$B = 64^\circ 54' 47''$$

$$C = 180 - A - B = 69^\circ 43' 20''$$

$$= 69.7224$$

$$\frac{c}{\sin 69.7224} = \frac{14.3}{\sin 45.3647}$$

$$c = 18.85 = 18.9$$

$$B' = 180 - 64.9129^\circ$$

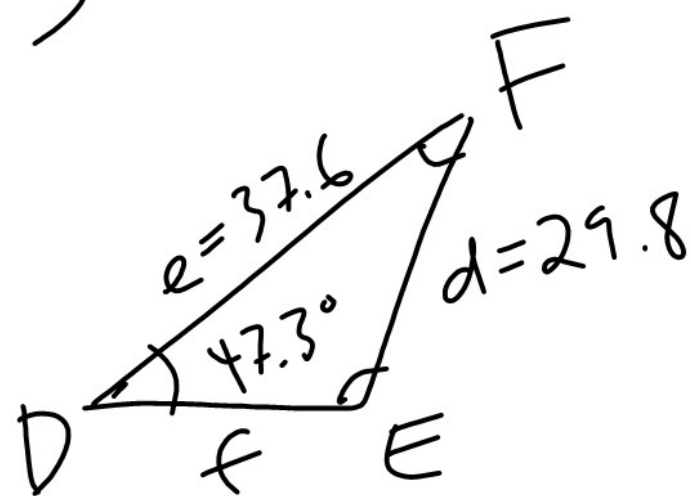
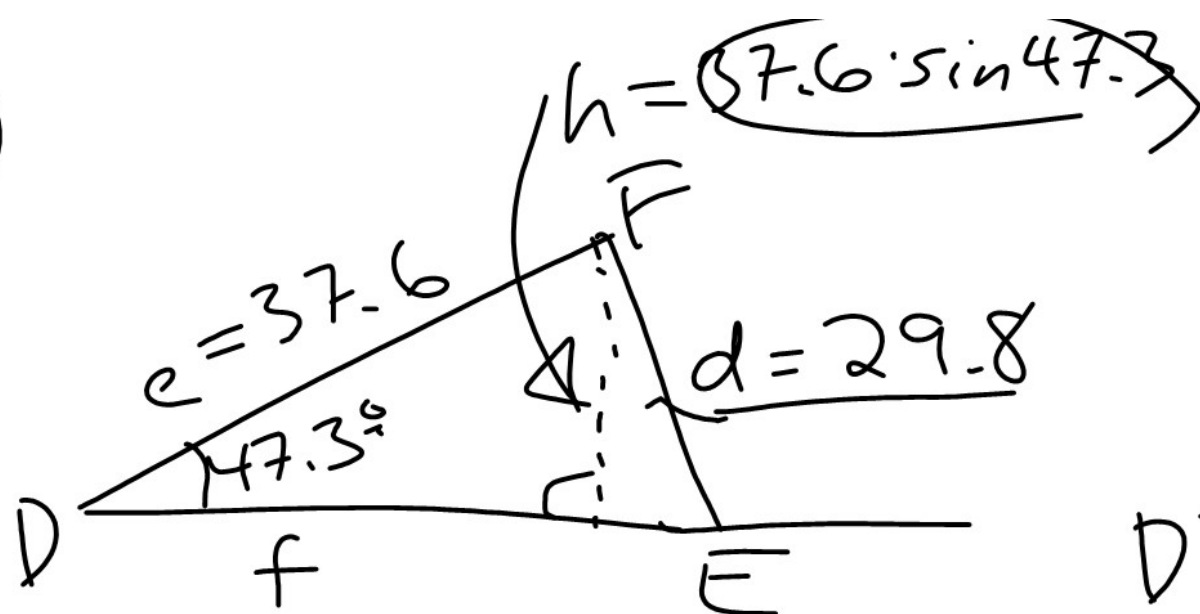
$$B' = 115.1^\circ$$

$$C' = 180 - A - B' = 180 - 45.3647 - 115.1^\circ = 19.5482$$

$$\frac{c'}{\sin 19.5482} = \frac{14.3}{\sin 45.3647} = 19.5^\circ$$

$$c' = 6.7$$

6)



$$\frac{\sin E}{37.6} = \frac{\sin 47.3}{29.8}$$

$$E = \sin^{-1} \left( \frac{37.6 \sin 47.3}{29.8} \right)$$

$$E = 68.01^\circ$$

$$F = 180 - D - E$$

$$F = 64.69^\circ$$

$$A = \frac{1}{2} ed \sin F$$

$$= \frac{1}{2} (37.6)(29.8) \sin 64.69^\circ$$

$$= 506.46$$

$$E' = 180 - 68.01$$

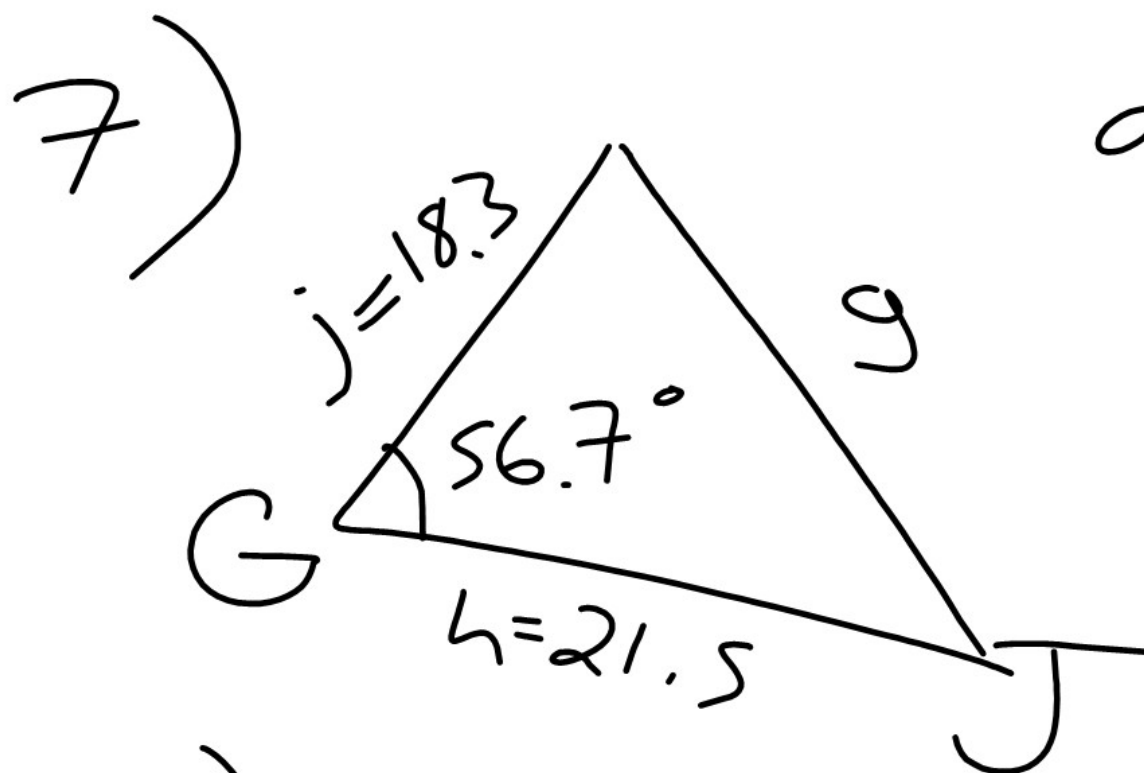
$$= 111.99^\circ$$

$$F' = 180 - D - E'$$

$$= 20.71$$

$$A' = \frac{1}{2} (37.6)(29.8) \sin(20.71)$$

$$A' = 198.12$$



$$a) g^2 = 18.3^2 + 21.5^2 - 2 \cdot 18.3 \cdot 21.5 \cdot \cos 56.7^\circ$$

$$g^2 = 365.114$$

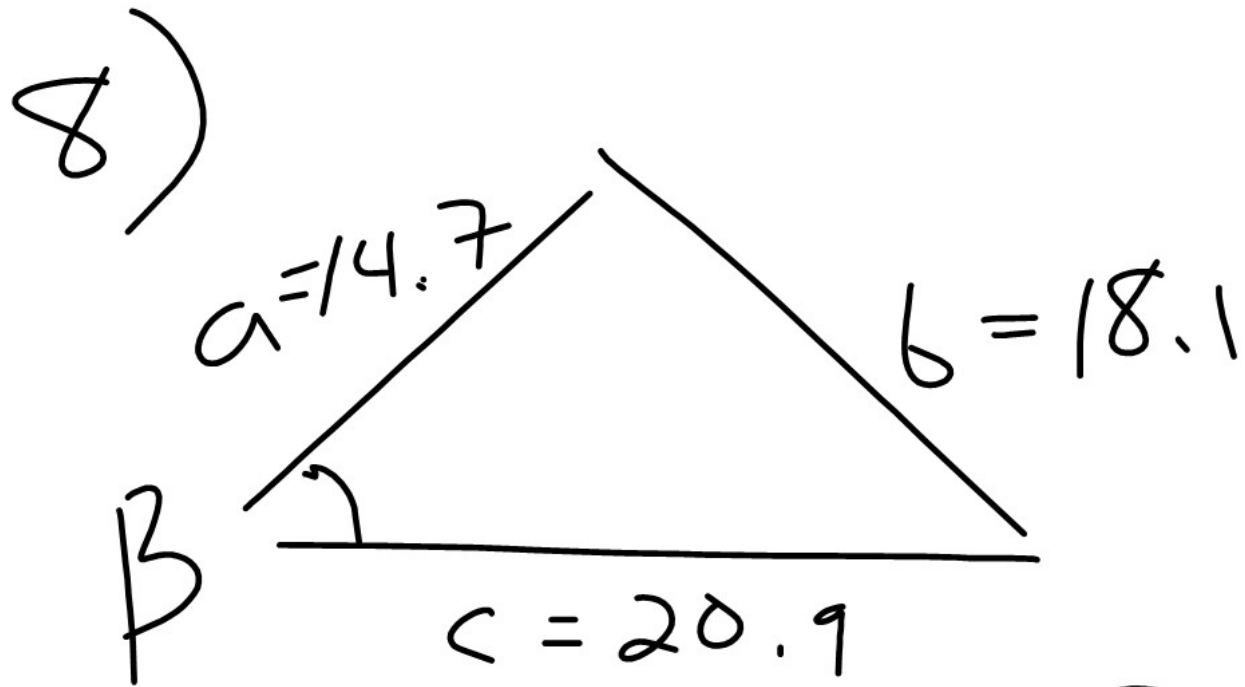
$$g = 19.1$$

6)

$$\frac{19.1}{\sin 56.7} = \frac{18.3}{\sin J}$$

$$J = \sin^{-1} \left( \frac{18.3 \sin 56.7}{19.1} \right)$$

$$J = 53.2^\circ$$



a)  $B = ?$

$$18.1^2 = 14.7^2 + 20.9^2 - 2 \cdot 14.7 \cdot 20.9 \cdot \cos B$$

$$B = \cos^{-1} \left( \frac{18.1^2 - 14.7^2 - 20.9^2}{-2 \cdot 14.7 \cdot 20.9} \right)$$

$$B = 58.03564$$

$$= 58^\circ 2' 8''$$

b)  $A = \frac{1}{2} a c \sin B$

$$= 130.32$$

Review Night  
6:30