

Trigonometry Test

1a) $5\pi \times \frac{180}{\pi} = 900^\circ$

b) $\frac{3\pi}{2} \times \frac{180}{\pi} = 270^\circ$

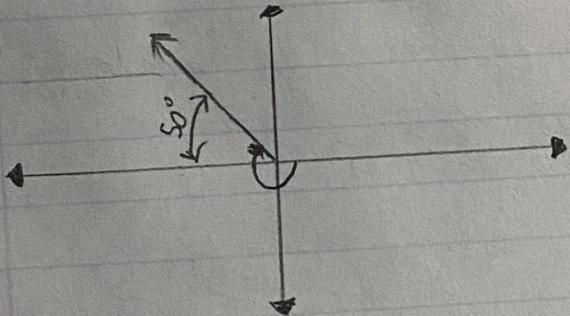
c) $6.7 \times \frac{180}{\pi} = 383.88^\circ \approx 384^\circ$

2a) $150 \times \frac{\pi}{180} = \frac{5\pi}{6}$

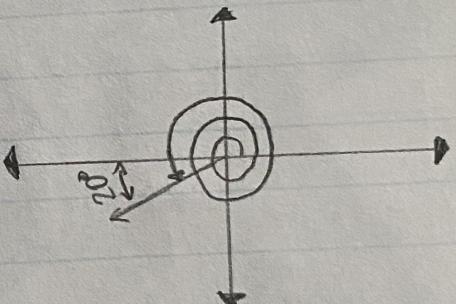
b) $430 \times \frac{\pi}{180} = \frac{43\pi}{18}$

c) $7 \times \frac{\pi}{180} = \frac{7\pi}{180}$

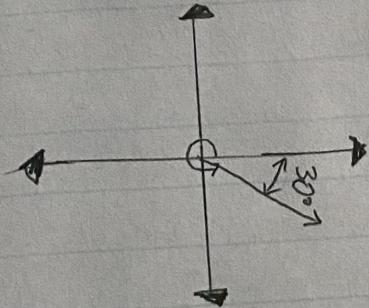
3a)

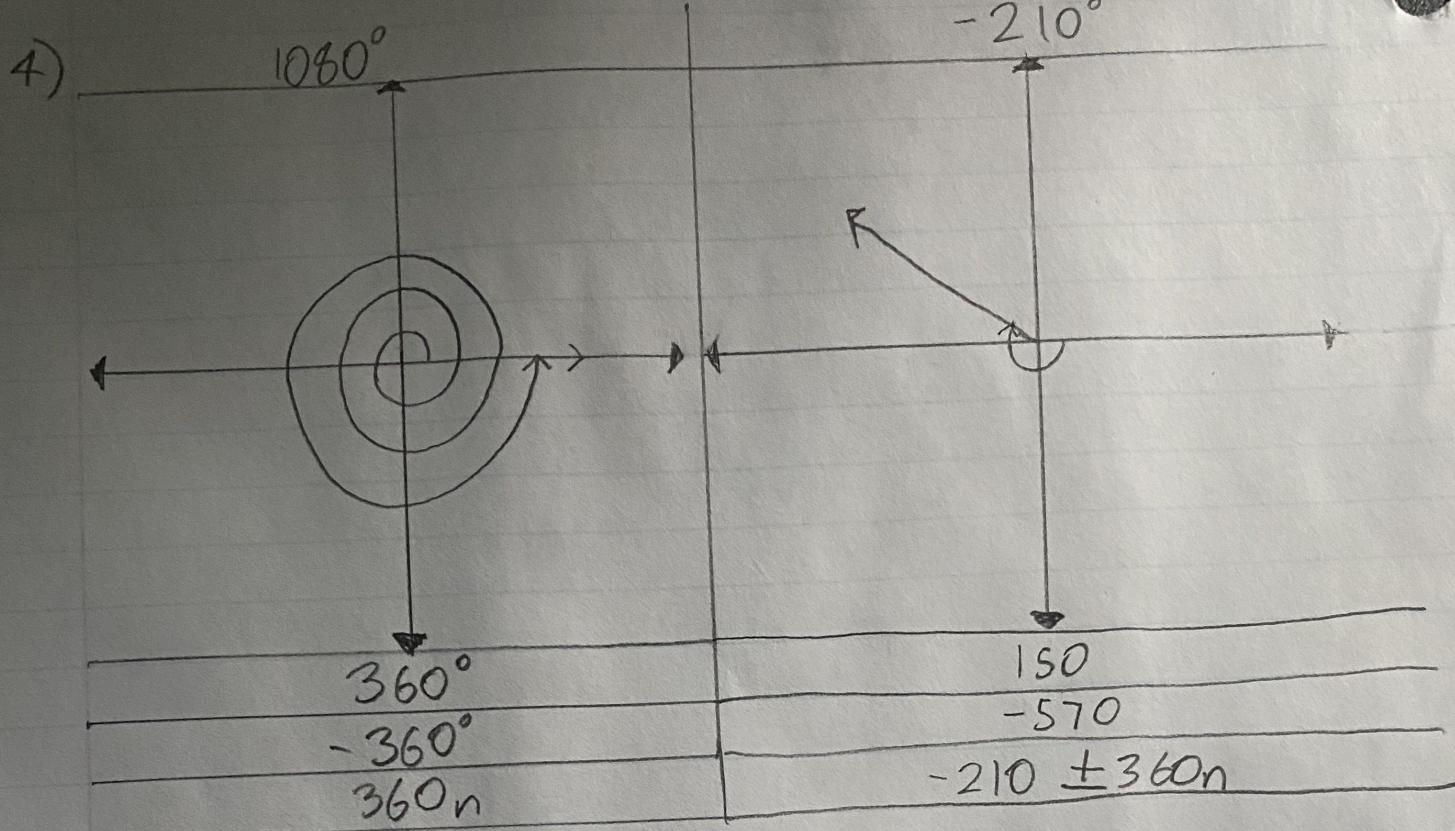


b)



c) $-\frac{33\pi}{18} \times \frac{180}{\pi} = -330^\circ$





$$5) \sin \theta = \frac{\text{opp}}{\text{Hyp}} = \frac{b}{c}$$

$$\sec \beta = \frac{\text{adj}}{\text{Hyp}}^{-1} = \frac{\text{Hyp}}{\text{adj}} = \frac{c}{b}$$

$$\tan \beta = \frac{\text{opp}}{\text{adj}} = \frac{a}{b}$$

$$6) \sin 30^\circ = \frac{1}{2}$$

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

$$\tan 45^\circ = 1$$

- a) 0.731
- b) 0.454
- c) -3.732
- d) 1.008
- e) 2.924
- f) 28.636

$$9a) 67^\circ$$

$$b) n.p.$$

$$c) 85^\circ$$

$$d) 27^\circ$$

$$e) 7^\circ$$

$$f) 61^\circ$$

$$9) \cos^{-1} \frac{3}{4} \approx 41^\circ$$

Since $0^\circ \leq 41^\circ \leq 90^\circ$, $\beta = 41^\circ$

$$\begin{aligned} & \cos(90^\circ - 41^\circ) \\ &= \cos(49^\circ) \\ &\approx 0.656 \\ &= \frac{62}{125} \end{aligned}$$

$$10a) \sin(54^\circ) \times 34.8 \approx 28.2$$

$$b) (\csc(74^\circ) \div 456)^{-1} \approx 438.3$$

$$11) \cos^{-1} \frac{15}{17} \approx 28^\circ = \frac{7\pi}{45}$$

Since $0 \leq \frac{7\pi}{45} \leq \frac{\pi}{2}$, $\theta = \frac{7\pi}{45}$

$$\tan \frac{7\pi}{45} \approx 0.532 = \frac{133}{250}$$