

$$a = \theta r$$

$$4500 = \theta (6400)$$

$$\frac{45}{64} = \theta$$

b) $\frac{45}{64} \cdot \frac{180}{\pi} = 40^\circ$

c) $a = \frac{45}{64} (6400 + 9.5)$

$$a = 4506.68 \text{ km}$$

d) $a = \pi (6400 + 9.5)$
 $= 20,136.04 \text{ km}$

2) $170^\circ \times \frac{\pi}{180} = \frac{17\pi}{18}$

b) $340^\circ \times \frac{\pi}{180} = \frac{17\pi}{9}$

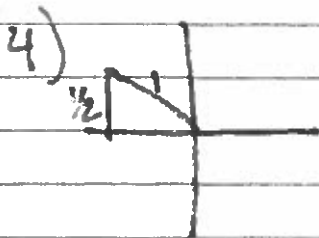
c) $700^\circ \times \frac{\pi}{180} = \frac{35\pi}{9}$

3) $-\pi \times \frac{180}{\pi} = -180^\circ + 360 = 180^\circ$

$$\frac{35\pi}{9} - 2\pi = \frac{17\pi}{9}$$

b) $-\frac{\pi}{3} \times \frac{180}{\pi} = -180^\circ = -60^\circ + 360 = 300^\circ$

c) $\frac{15\pi}{11} \times \frac{180}{\pi} = 245.45^\circ$



$$\sin \theta = \frac{y}{x}$$

$$x^2 + \left(\frac{1}{2}\right)^2 = 1^2$$

$$x^2 + \frac{1}{4} = 1$$

$$x^2 = \frac{3}{4}$$

$$x = \pm \sqrt{\frac{3}{4}}$$

$$x = \pm \frac{\sqrt{3}}{2}$$

$$x = -\frac{\sqrt{3}}{2} \text{ because } \theta \text{ is in QII}$$

c) $\tan \theta = \frac{y}{x}$

$$= \frac{1/2}{x}$$

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

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

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

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