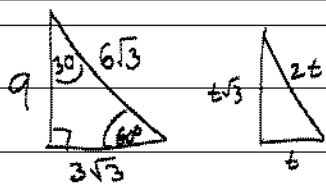


2)

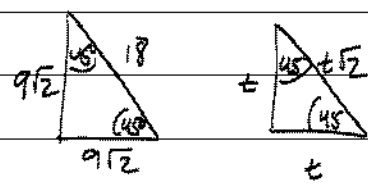


$$t\sqrt{3} = 9$$

$$t = \frac{9}{\sqrt{3}} = 3\sqrt{3}$$

$$2t = 2(3\sqrt{3}) = 6\sqrt{3}$$

3)



$$t\sqrt{2} = 18$$

$$t = \frac{18}{\sqrt{2}}$$

$$= 9\sqrt{2}$$

5) $(\cos\theta + \sin\theta)^2 = \cos^2\theta + 2\sin\theta\cos\theta + \sin^2\theta$
 $= 1 + 2\sin\theta\cos\theta$

6) $(1 + \cot\theta)(1 - \cot\theta)$
 $= 1 - \cot^2\theta$

7) $\sin\theta - \frac{1}{\cos\theta} = \frac{\sin\theta\cos\theta - 1}{\cos\theta}$

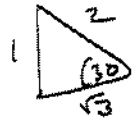
8) $\sec\theta - \tan\theta \sin\theta$
 $= \frac{1}{\cos\theta} - \frac{\sin\theta}{\cos\theta} \cdot \sin\theta$
 $= \frac{1 - \sin^2\theta}{\cos\theta}$
 $= \frac{\cos^2\theta}{\cos\theta}$
 $= \cos\theta$

9) $\frac{\sec\theta}{\tan\theta} = \frac{\frac{1}{\cos\theta}}{\frac{\sin\theta}{\cos\theta}} = \frac{1}{\cos\theta} \cdot \frac{\cos\theta}{\sin\theta} = \frac{1}{\sin\theta}$

10) $\sec 315^\circ = \sec 45^\circ = \sqrt{2}$ 11) $\cot 60^\circ = \frac{1}{\sqrt{3}}$

$\theta \in QIV$
 $\hat{\theta} = 360^\circ - 315^\circ$
 $= 45^\circ$





(12) $\cos 150^\circ = -\cos 30^\circ = -\frac{\sqrt{3}}{2}$

$\theta \in \text{Q II}$
 $\hat{\theta} = 180^\circ - 150^\circ$
 $= 30^\circ$

(13) $\sec \frac{5\pi}{4} = -\sec \frac{\pi}{4} = -\sqrt{2}$

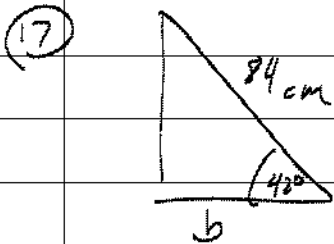
$\theta \in \text{Q III}$
 $\hat{\theta} = \frac{5\pi}{4} - \pi$
 $\hat{\theta} = \frac{\pi}{4}$

(16) $44^\circ 39' = 44^\circ + \left(\frac{39}{60}\right)^\circ$
 $= 44^\circ + .65^\circ$
 $= 44.65^\circ$

(19) $\tan 55.23^\circ = \frac{12.49}{a}$

$a = \frac{12.49}{\tan 55.23^\circ}$

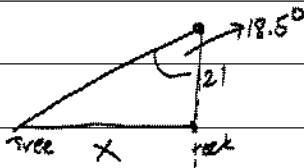
$\approx 8.7 \text{ yd}$



$\cos 42^\circ = \frac{b}{84}$

$b = 84 \cos 42^\circ$
 $b = 62.4$

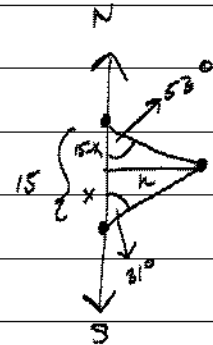
(20)



$\tan(18.5^\circ) = \frac{x}{21}$

$x = 21 \tan(18.5^\circ)$
 \approx

(21)



$\tan 31^\circ = \frac{x}{h}$

$\tan 53^\circ = \frac{h}{15-x}$

$h = x \tan 31^\circ$ and $h = (15-x) \tan 53^\circ$

$x \tan 31^\circ = (15-x) \tan 53^\circ$

$x = \frac{15 \tan 53^\circ}{\tan 31^\circ + \tan 53^\circ}$

$\approx 10.3 \text{ m}$

$h \approx 10.3 \tan 31^\circ$

$h \approx 6.2 \text{ miles off shore}$

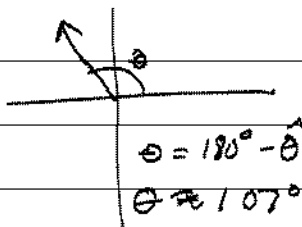
24

$$\sec \theta = -3.4170$$

$$\cos \theta = -\frac{1}{3.4170}$$

$$\hat{\theta} = \cos^{-1}\left(\frac{1}{3.4170}\right)$$

$$\approx 73^\circ$$



25

$$s = r\theta$$

$$r = \frac{s}{\theta} = \frac{5}{10} = \frac{1}{2} \text{ ft}$$

Thanks Jeremy



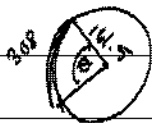
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$$A = \frac{1}{2} r^2 \theta$$

$$= \frac{1}{2} (6)^2 (2.7)$$

$$= 48.6 \text{ in}^2$$

27



$$d = 323$$

$$r = 161.5$$

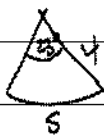
$$s = r\theta$$

$$\theta = \frac{s}{r}$$

$$= \frac{308}{161.5}$$

$$\theta \approx 1.9 \text{ rad}$$

28

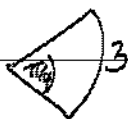


$$s = r\theta$$

$$= 4 \left(\frac{3}{4}\right)$$

$$s \approx 1.6 \text{ feet per sec}$$

29



$$A = \frac{1}{2} \left(\frac{12}{\pi}\right)^2 \left(\frac{\pi}{4}\right)$$

$$\approx \frac{1}{2} \left(\frac{144}{4\pi}\right)$$

$$\left\{ \begin{array}{l} s = r\theta \\ 3 = r \left(\frac{\pi}{4}\right) \\ r = \frac{12}{\pi} \end{array} \right.$$

$$\approx 5.7$$

Thanks Manuel

$$= \frac{5}{2} \cdot \frac{4}{5\sqrt{3}} 25 + 60 = c^2$$

~~cos 60~~ =

$$c = \sqrt{75}$$

$$= 5\sqrt{3}$$