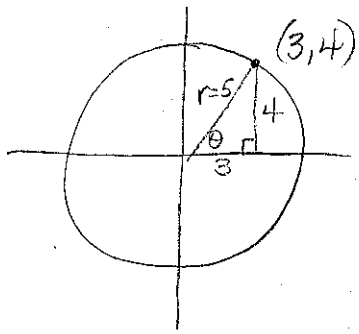
10-1 Reviewing Trigonometry

1. $\frac{7\pi}{4} \cdot \frac{180^\circ}{\pi} = 315^\circ$

2. $250^\circ \cdot \frac{\pi}{180^\circ} = \frac{78.5398}{18} = 4.36$ rad

3.

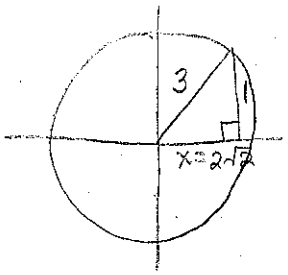


$3^2 + 4^2 = r^2$
$9 + 16 = r^2$
$25 = r^2$
$5 = r$

$\sin\theta = \frac{4}{5}$ $\cos\theta = \frac{3}{5}$ $\tan\theta = \frac{4}{3}$

$\csc\theta = \frac{1}{\frac{4}{5}} = \frac{5}{4}$ $\sec\theta = \frac{1}{\frac{3}{5}} = \frac{5}{3}$ $\cot\theta = \frac{1}{\frac{4}{3}} = \frac{3}{4}$

11.



$1^2 + x^2 = 3^2$
$1 + x^2 = 9$
$x^2 = 8$
$x = \sqrt{8}$
$x = 2\sqrt{2}$

$\cos\theta = \frac{2\sqrt{2}}{3}$

$\tan\theta = \frac{1}{2\sqrt{2}}$

5. see next page

6. a) $\sin\frac{\pi}{3} - \cos\frac{\pi}{6} = \frac{\sqrt{3}}{2} - \frac{\sqrt{3}}{2} = 0$

b) $4\sin\frac{\pi}{6} + \sec^2\frac{\pi}{4} = 4\sin\frac{\pi}{6} + \frac{1}{\cos^2\frac{\pi}{4}} =$

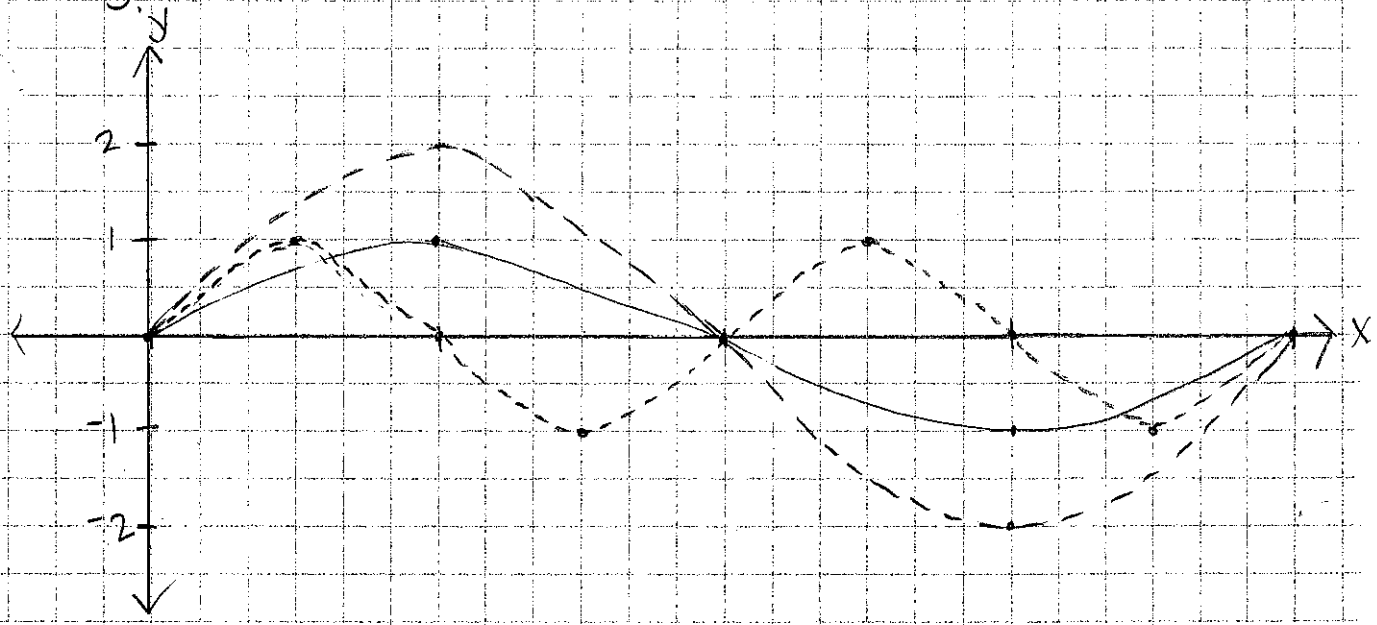
$2\cancel{4}\left(\frac{1}{\cancel{2}}\right) + \frac{1}{\left(\frac{1}{\sqrt{2}}\right)^2} =$

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

$2 + \frac{1}{\frac{1}{2}} = 2 + 1 \cdot \frac{2}{1} = 2 + 2 = 4$

10-1 cont.

#5.



—— $y = \sin x$

– – – – $y = 2\sin x$

------ $y = \sin 2x$