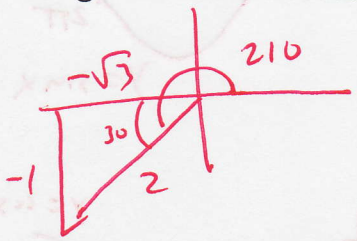
Trig. Quiz 10.9.09

Key

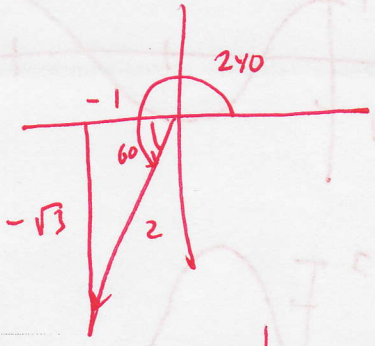
For questions 1 – 5, give the exact value, also draw the angle in standard position, and show the reference angle and reference triangle, as well as the x, y, and r values.

1. $\sec(210) = \frac{r}{x}$



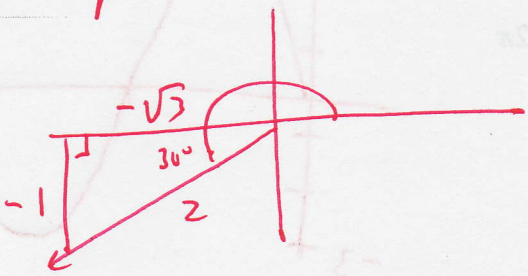
$= \frac{2}{-\sqrt{3}} = \boxed{\frac{-2\sqrt{3}}{3}}$

2. $\cot 240 = \frac{x}{y}$



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

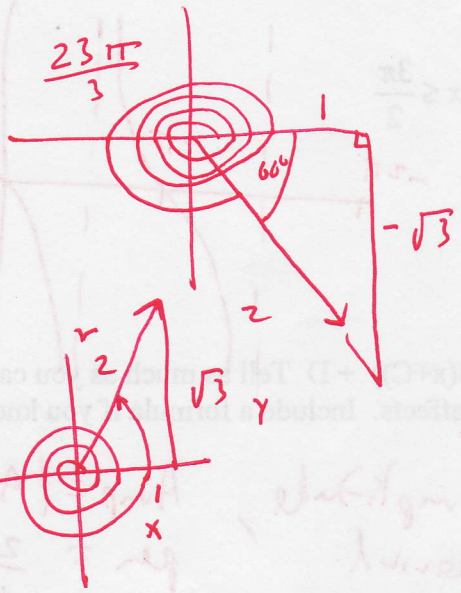
3. $\tan\left(\frac{7\pi}{6}\right) = \frac{y}{x}$



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

4. $\sin\left(\frac{23\pi}{3}\right) = 1380°$

$= \frac{y}{r}$



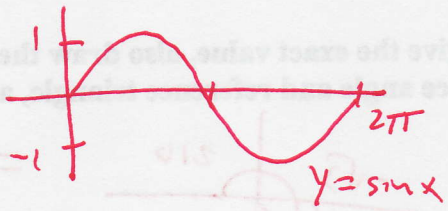
$= \boxed{\frac{-\sqrt{3}}{2}}$

5. $\cos(1140) = \frac{x}{r}$

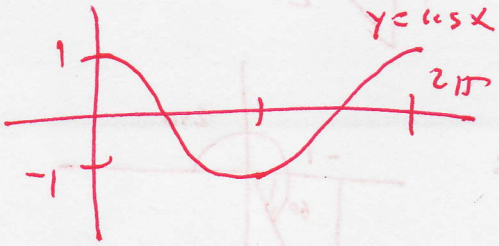
$= \boxed{\frac{1}{2}}$

For Questions 6 – 10. Draw the requested graph. Give the scale on the x and y axis.

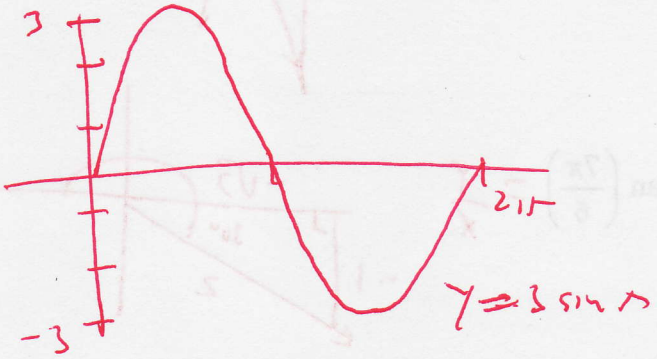
6. y=sin(x) $0 \le x \le 2\pi$



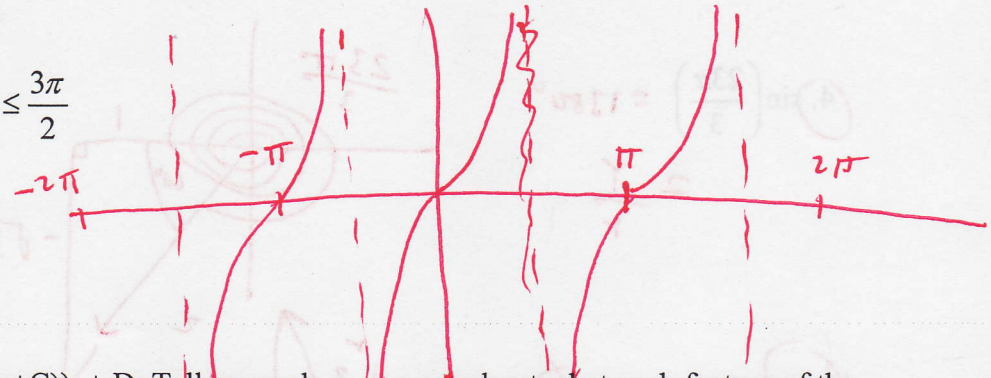
7. y=cos(x) $0 \le x \le 2\pi$



8. y=3sin(x) $0 \le x \le 2\pi$



9. y=tan(x) $-\frac{3\pi}{2} \le x \le \frac{3\pi}{2}$



10. For y=A sin (B(x+C)) + D Tell as much as you can about what each feature of the graph each letter affects. Include a formula if you know one.

A → Amplitude, Amp = |A|

B → period $\quad$ per = $\frac{2\pi}{|B|}$ = $\frac{\text{Fundamental period}}{|B|}$

C → phase shift

D → vertical shift