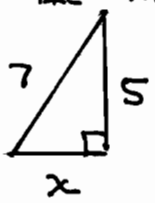
M229 (10:30) QUIZ 1

1. I PURCHASED A WEBASSIGN CODE ONLINE (Y OR N)

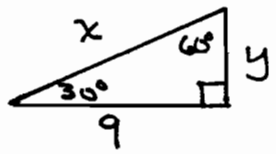
   IF YES, I USED MY ACCESS CODE (Y OR N)

2. FIND THE MISSING SIDES:

(a)



(b)



3. (a) DRAW $\theta = 105^\circ$ IN STANDARD POSITION
   (b) FIND THE SUPPLEMENT OF θ
   (c) FIND ONE ANGLE COTERMINAL WITH θ
   (d) FIND ALL ANGLES COTERMINAL WITH θ

4. FIND ALL SIX TRIGONOMETRIC RATIOS FOR θ IF $(3, -\sqrt{7})$ IS ON THE TERMINAL SIDE OF θ.

5. FIND $\cot\theta$ IF $\sin\theta = 1/4$ AND $\cos\theta < 0$.

6. IF $\cos\theta = 1/3$ AND $\theta \in$ QIV, USE IDENTITIES TO FIND
   (a) $\sec\theta$
   (b) $\sin\theta$

QUIZ 1 KEY

2. (a) $x^2+5^2=7^2$

$x^2+25=49$

$x^2=24$

$x=\sqrt{24}$

$=\boxed{2\sqrt{6}}$

(b) $y=\frac{9}{\sqrt{3}}$

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

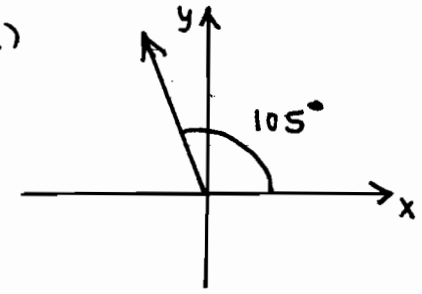
$=\boxed{3\sqrt{3}}$

$x=2(3\sqrt{3})$

$=\boxed{6\sqrt{3}}$

OR $\frac{18}{\sqrt{3}}$

3. (a)



(b) $180^\circ-105^\circ=\boxed{75^\circ}$

(c) $105^\circ+(-360^\circ)=-255^\circ$

(d) $\boxed{105^\circ+360^\circ k}$

4. $x=3,\ y=-\sqrt{7}$

$r=\sqrt{3^2+(-\sqrt{7})^2}$

$=\sqrt{9+7}$

$=\sqrt{16}$

$=4$

$\sin\theta=\frac{-\sqrt{7}}{4}$	$\csc\theta=-\frac{4}{\sqrt{7}}$
$\cos\theta=\frac{3}{4}$	$\sec\theta=\frac{4}{3}$
$\tan\theta=\frac{-\sqrt{7}}{3}$	$\cot\theta=-\frac{3}{\sqrt{7}}$

5. θ IS IN QII

LET $y=1,\ r=4$

$4^2=x^2+(1)^2$

$16=x^2+1$

$15=x^2$

$-\sqrt{15}=x$ (HAS TO BE NEGATIVE IN QII)

$\cot\theta=-\frac{\sqrt{15}}{1}=\boxed{-\sqrt{15}}$

6. $\sec\theta=\frac{1}{\cos\theta}$

$=\frac{1}{1/3}$

$=\boxed{3}$

$\sin\theta=-\sqrt{1-\cos^2\theta}$ (IN QIV)

$=-\sqrt{1-(1/3)^2}$

$=-\sqrt{1-1/9}$

$=-\sqrt{8/9}$

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