CH. P Review WS **Name :** _____ **Per.** ____

Use Bowtie Method to combine fractions

1) $\frac{4}{7}+\frac{3}{5}$

2) $\frac{5}{x}-\frac{4}{x+2}$

3) $\frac{\cos\theta}{\sin\theta}+\frac{\sin\theta}{\cos\theta}$

Solve the inequalities

4) $x^2-9>0$

5) $\frac{x-1}{(x+4)(x-9)}\le 0$

6) $\frac{(5x-7)^2}{(x+1)(x-5)^3}\ge 0$

Writing Equations

7) Write an equation that has the following slope and passes thru the given point.

a) $m=25$; $(-9,15)$

b) $m=-\frac{4}{9}$; $(7,-20)$

c) $m=-8$; $(30,40)$

8) Write the equation that passes thru the following points :

a) $(-3,6)$ and $(2,7)$

b) $(4,-6)$ and $(4,11)$

c) $(10,-3)$ and $(7,-3)$

9) Given the line $y=11x+9$, find :

a) The line $\perp$ through the point $(-3,8)$

b) The line $\parallel$ through the point $(-3,8)$

10) Given the line $8x+7y-6=0$, find :

a) The line $\parallel$ through the point $(1,-5)$

b) The line $\perp$ through the point $(1,-5)$

Composition of Functions

11) $f(x)=3x-5$ $\quad g(x)=\dfrac{5}{3+x}$ $\quad h(x)=x^2+11$

$f\circ g=$ $\quad h\circ f=$ $\quad g\circ h=$

$(h\circ f)(4)=$ $\quad (g\circ h)(-5)=$ $\quad (f\circ f\circ f)(2)=$

Find the domain for each

12) $g(x)=\dfrac{x+10}{x-20}$ $\quad$ 13) $g(x)=\dfrac{x-3}{(x+11)(x-9)}$ $\quad$ 14) $f(x)=\dfrac{x+5}{x^2-3x-40}$

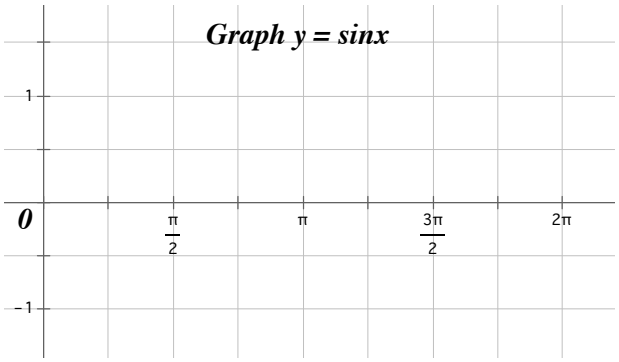
15) $f(x)=\sqrt{x-8}$ $\quad$ 16) $f(x)=\sqrt{17-x}$ $\quad$ 17) $g(x)=\sqrt{12x+7}$

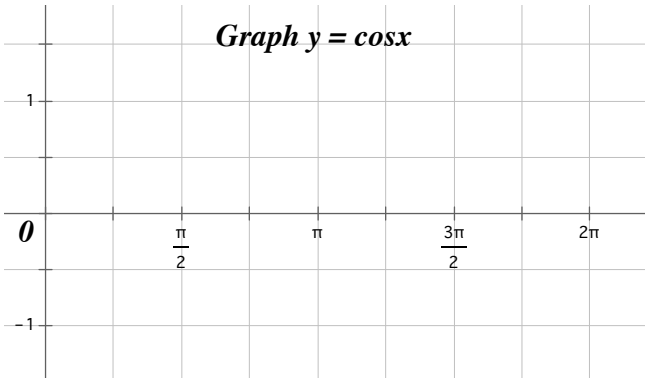
18) $f(x)=\dfrac{\sqrt{x+13}}{x-2}$ $\quad$ 19) $f(x)=\dfrac{\sqrt{x+1}}{x+2}$ $\quad$ 20) $f(x)=\dfrac{5-x}{x^2+2}$

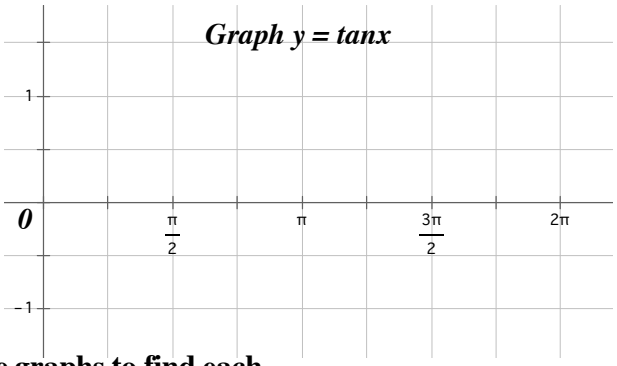
21) $f(x)=\ln x$ $\quad$ 22) $f(x)=\ln(x+30)$ $\quad$ 23) $f(x)=\ln(15-x)$

Fill in each graph

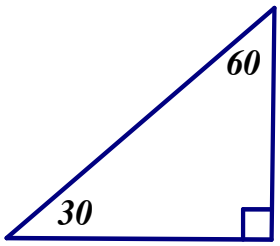
24)

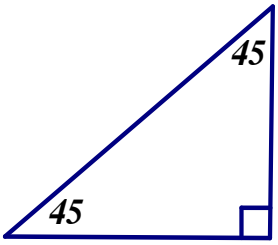






Fill in the sides of the triangles.





Use graphs to find each

25*a*) $\sin 0° =$ *b*) $\sin 90° =$ *c*) $\sin 180° =$ *d*) $\sin 270° =$ *e*) $\sin 360° =$

26*a*) $\cos 0° =$ *b*) $\cos 90° =$ *c*) $\cos 180° =$ *d*) $\cos 270° =$ *e*) $\cos 360° =$

27*a*) $\tan 0° =$ *b*) $\tan 90° =$ *c*) $\tan 180° =$ *d*) $\tan 270° =$ *e*) $\tan 360° =$

Use triangles to find each

28*a*) $\sin 30° =$ *b*) $\sin 45° =$ *c*) $\sin 60° =$

d) $\sin 150° =$ *e*) $\sin 225° =$ *f*) $\sin 300° =$

29*a*) $\cos 30° =$ *b*) $\cos 45° =$ *c*) $\cos 60° =$

d) $\cos 150° =$ *e*) $\cos 225° =$ *f*) $\cos 300° =$

30*a*) $\tan 30° =$ *b*) $\tan 45° =$ *c*) $\tan 60° =$

d) $\tan 150° =$ *e*) $\tan 225° =$ *f*) $\tan 300° =$

Solve for x from $[0, 2\pi]$

31a) $\sin\theta = 0$ b) $\sin\theta = 1$ c) $\sin\theta = -1$

32a) $\cos\theta = 0$ b) $\cos\theta = 1$ c) $\cos\theta = -1$

33a) $\tan\theta = 0$ b) $\tan\theta = undef.$

34a) $\cos x = \frac{1}{2}$ b) $\sin x = \frac{-\sqrt{2}}{2}$ c) $\tan x = \frac{1}{\sqrt{3}}$

35a) $\cos x = \frac{-\sqrt{3}}{2}$ b) $\sin x = \frac{\sqrt{3}}{2}$ c) $\tan x = -1$

36) **Sketch the piece - wise function**

$$f(x) = \begin{Bmatrix} x & for & x < -1 \\ 2x^2 & for & -1 \le x \le 2 \\ 4 & for & x > 2 \end{Bmatrix}$$