

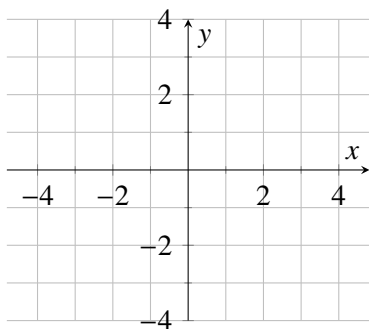
## Transformation Review

1. Explain what each does to the *original* graph  $y = f(x)$ .

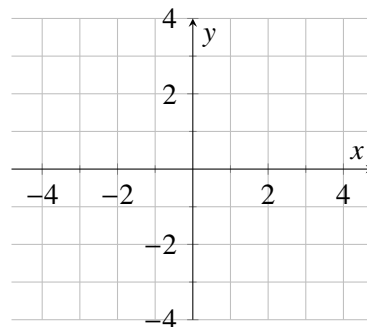
Assume $c > 0$	Description	Assume $c > 1$	Description
$f(x) + c$		$cf(x)$	
$f(x) - c$		$f(cx)$	
$f(x + c)$		$-f(x)$	
$f(x - c)$		$f(-x)$	

2. Let  $f(x) = x^2$ . Graph each of the following *using the ideas from # 1 above*.

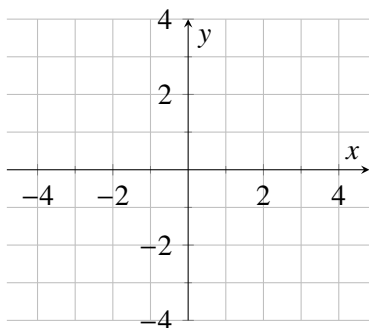
(a)  $f(x)$



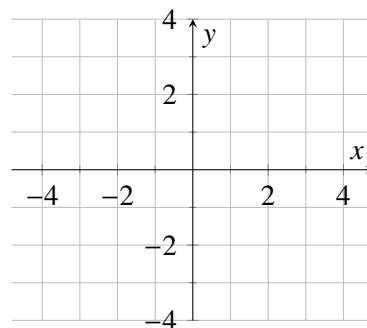
(c)  $f(x - 1)$



(b)  $-f(x)$

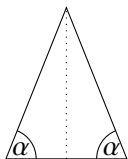


(d)  $f(x - 1) - 1$

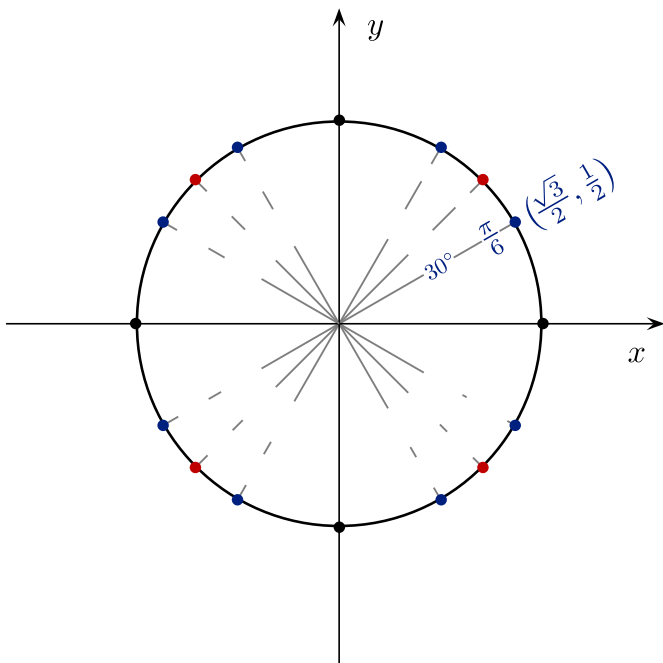


## Trigonometry Review

3. An isosceles triangle has a height of 10 ft and its base is 8 feet long. Determine the sine, cosine, tangent, cotangent, secant and cosecant of the base angle  $\alpha$ .



4. Using a 45-45-90 triangle and a 30-60-90 triangle find the coordinates of **any three marked points, one of each color** on the unit circle. (The blue points are at multiples of  $\frac{\pi}{6}$ , the red points are at multiples of  $\frac{\pi}{4}$ , and the black points are at multiples of  $\frac{\pi}{2}$ .)



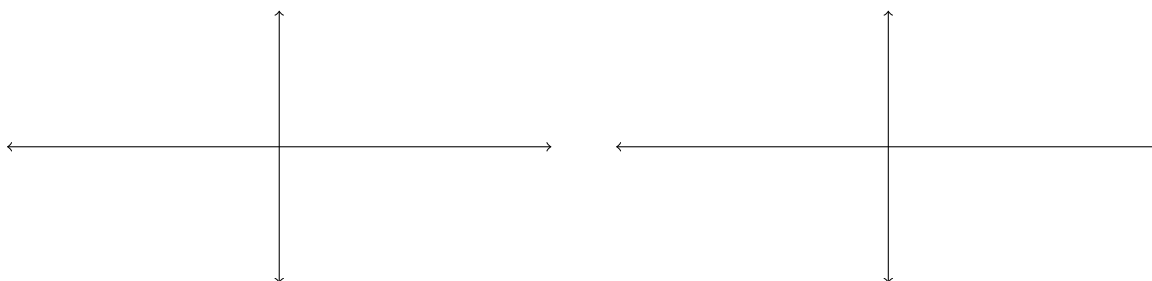
5. Without a calculator evaluate:

(a)  $\sin(\frac{2\pi}{3})$

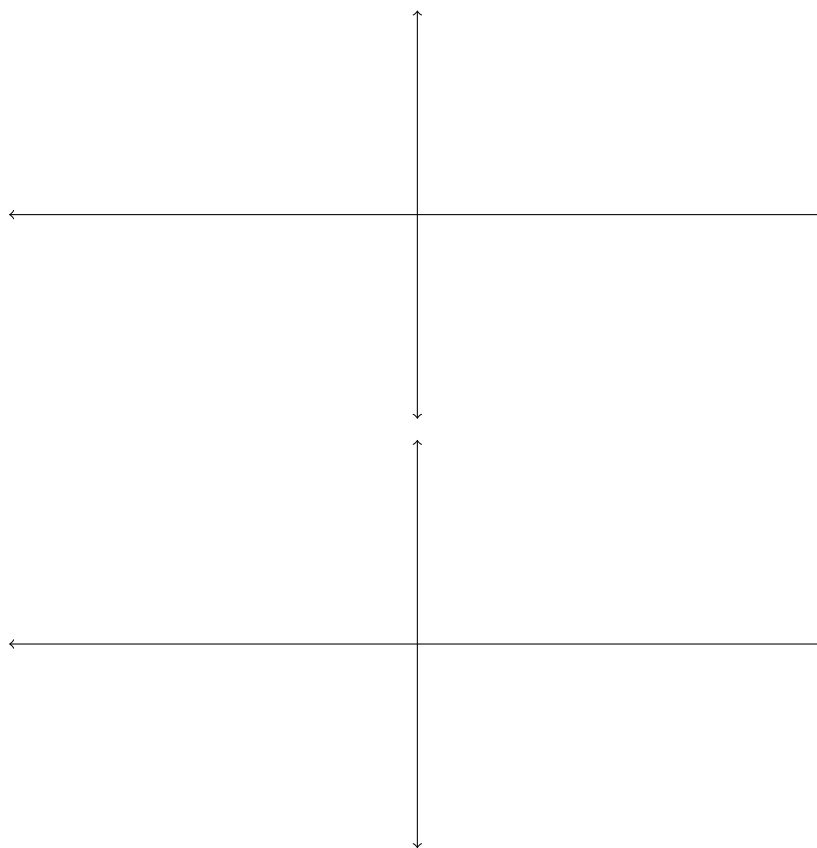
(b)  $\cos(\frac{5\pi}{4})$

(c)  $\tan(\frac{-\pi}{4})$

6. On the axes below, graph *at least two cycles* of  $f(x) = \sin x$ ,  $f(x) = \cos(x)$ . Label all  $x$ - and  $y$ -intercepts.



7. (a) Graph  $y = \sin(2x)$  and  $y = 3 - 2 \cos(x)$  on adjacent graphs. Label the points  $0, \pi/2, \pi, 3\pi/2$  and  $2\pi$  on the  $x$ -axis.



- (b) Use the graph of  $f(x) = \sin(2x)$  to determine the domain of  $f(x) = \csc(2x)$