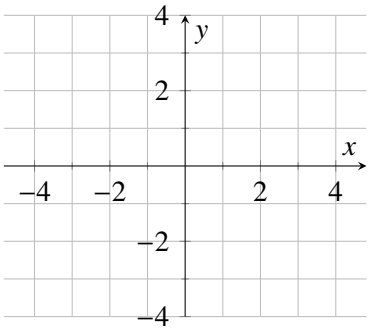
Transformation Review

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

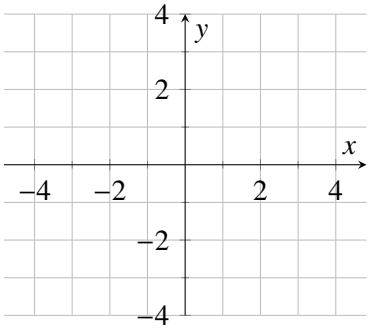
Assume $c > 0$	Description	Assume $c > 1$	Description
$f(x) + c$		$cf(x)$	
$f(x) - c$		$f(cx)$	
$f(x + c)$		$-f(x)$	
$f(x - c)$		$f(-x)$	

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

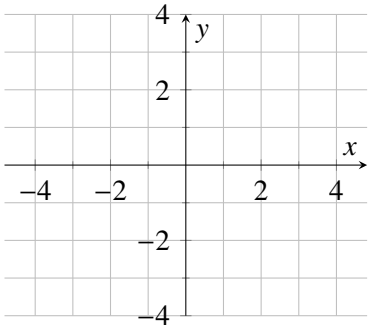
(a) $f(x)$



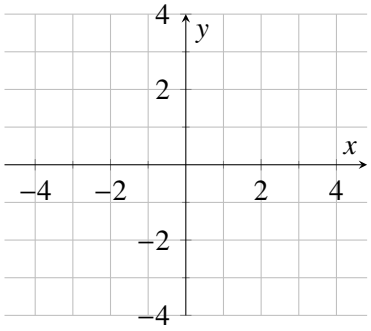
(b) $-f(x)$



(c) $f(x - 1)$

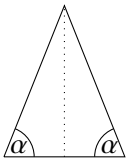


(d) $f(x - 1) - 1$

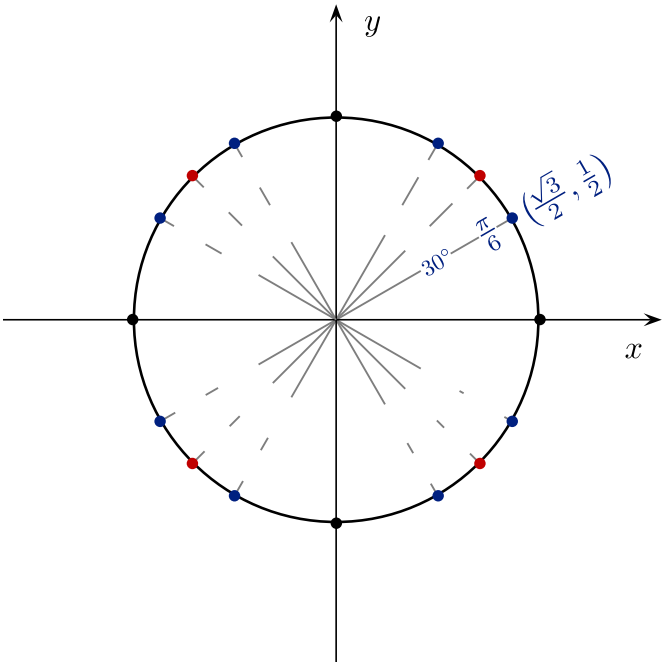


Trigonometry Review

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 α.



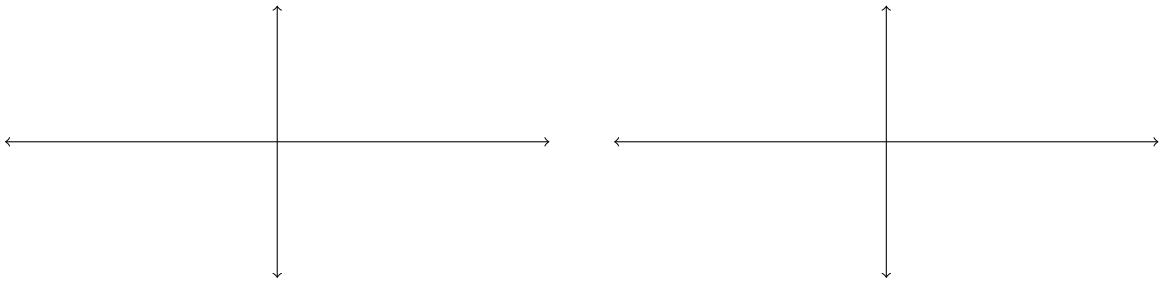
4. Using a 45-45-90 triangle and a 30-60-90 triangle find the coordinates of **any three marked points, one of each color** on the unit circle. (The blue points are at multiples of $\frac{\pi}{6}$, the red points are at multiples of $\frac{\pi}{4}$, and the black points are at multiples of $\frac{\pi}{2}$.)



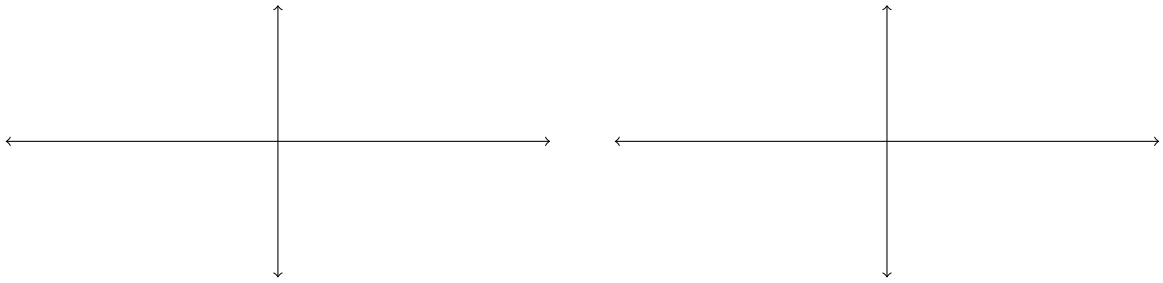
5. Without a calculator evaluate:

(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, $\pi/2$, π, $3\pi/2$ and 2π on the x-axis.



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