

3. Graph the function $g(x) = x^2$.

Graph the following functions on the same graph with $g(x)$:

a. $y = x^2 + 3$

b. $y = x^2 - 4$

c. $y = (x - 3)^2 - 3$

d. $y = (x + 4)^2 + 3$

e. $y = |x^2 - 1|$

4. Graph the function $h(x) = \sqrt{x}$.

Graph the following functions on the same graph with $h(x)$:

a. $y = \sqrt{x} - 2$

b. $y = \sqrt{x - 2}$

c. $y = -\sqrt{x}$

d. $y = 2\sqrt{x}$

e. $y = \sqrt{-x}$

5. Graph the function $k(x) = \cos x$.

Graph the following functions on the same graph with $k(x)$:

a. $y = 2 \cos x$

b. $y = (1/2) \cos x$

c. $y = \cos(x/2)$

d. $y = \cos(2x)$

6. Graph the function $l(x) = \sin x$.

Graph the following functions on the same graph with $l(x)$:

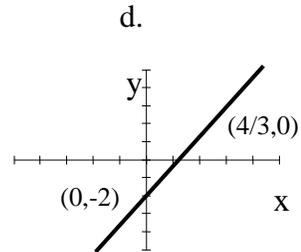
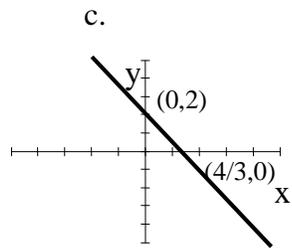
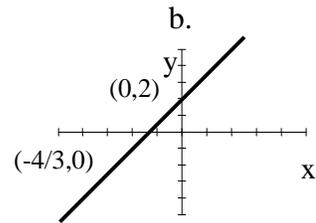
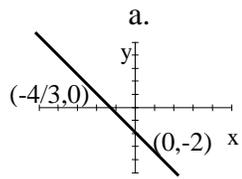
a. $y = 2 \sin x$

b. $y = \left(\frac{1}{2}\right) \sin x$

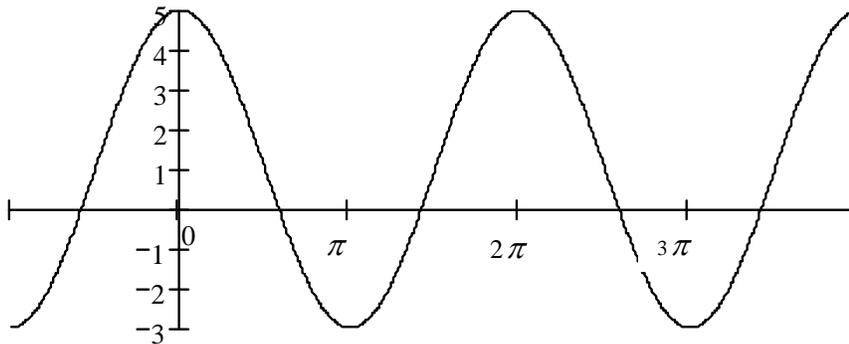
c. $y = \sin\left(\frac{x}{2}\right)$

d. $y = \sin(2x)$

7. Which of the following is the graph of the function $2y - 3x = 4$?



8. What is an equation of the following graph?



a. $4 \sin x + 1$

b. $4 \cos x + 1$

c. $5 \sin x$

d. $5 \cos x$

9. Given $f(x) = \sin x$, and $g(x) = 1 - \sqrt{x}$, find the functions $f \circ g, g \circ f, f \circ f, g \circ g$, and state their domains.

10. Given $f(x) = 1 - 3x$, and $g(x) = 5x^2 + 3x + 2$, find the functions $f \circ g$, and $g \circ f$, and state their domains.

11. Given $f(x) = \sqrt{x-1}$, $g(x) = x^2 + 2$, and $h(x) = x + 3$, find the function $f \circ g \circ h$, and state its domain.