

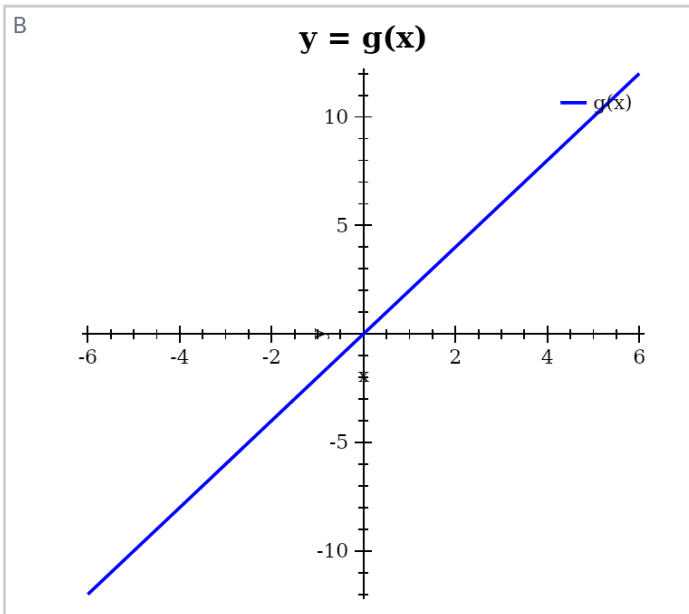
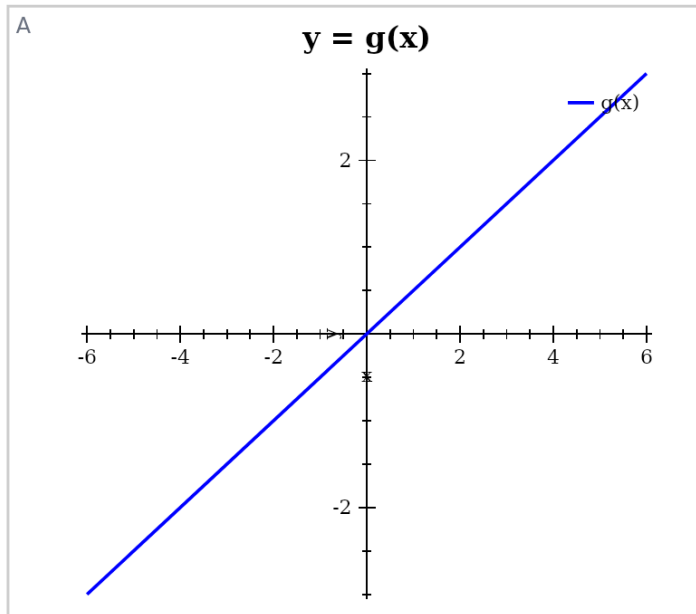


Determine transformed equations from graphs

1Which graph shows this transformation of $f(x)$ into $g(x)$?

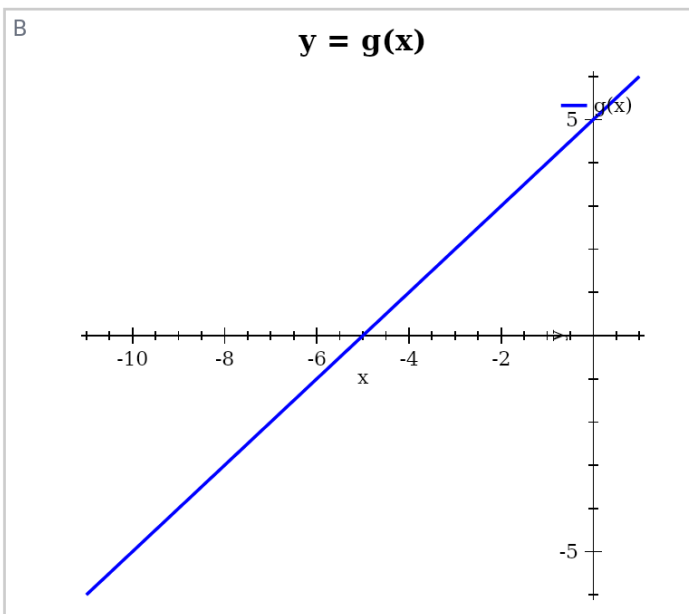
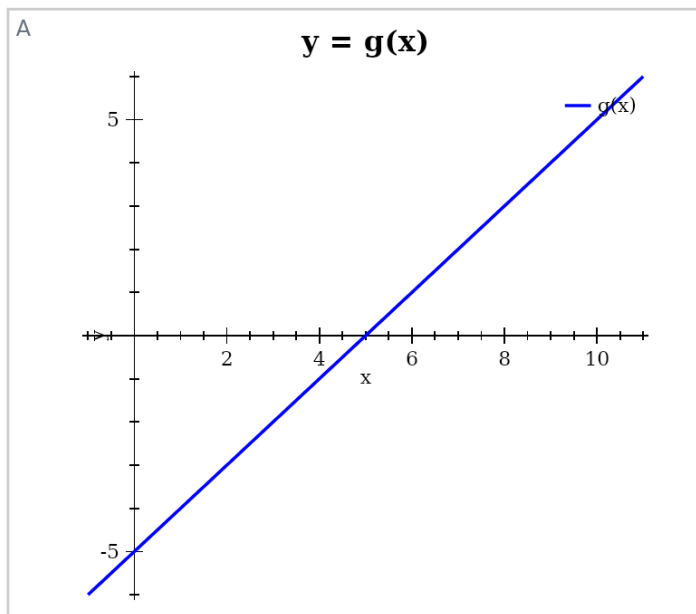
$$f(x) = x$$

Vertical stretch : 2

**2**Which graph shows the transformation of $f(x)$ into $g(x)$?

$$f(x) = x$$

$$g(x) = f(x - 5)$$



**Determine transformed equations from graphs****3**

If the vertex of $f(x)$ is (a,b) , what is the vertex of $g(x)$?

$$g(x) = f(x - 3)$$

A

$$(a + 3, b)$$

B

$$(a - 3, b)$$

C

$$(a, b + 3)$$

4

If the vertex of $f(x)$ is (a,b) , what is the vertex of $g(x)$?

$$g(x) = f(-x)$$

A

$$(-a, b)$$

B

$$(a, -b)$$

5

If the vertex of $f(x)$ is (a,b) , which function $g(x)$ would have this vertex?

$$(a - w, b)$$

A

$$g(x) = f(x - w)$$

B

$$g(x) = f(x + w)$$

6

If the vertex of $f(x)$ is (a,b) , what is the vertex of $g(x)$?

$$g(x) = -3f(x)$$

A

$$(-a, 3 \cdot b)$$

B

$$(a, -3 \cdot b)$$

C

$$\left(\frac{a}{3}, -b\right)$$

7

If the vertex of $f(x)$ is (a,b) , which function $g(x)$ would have this vertex?

$$\left(-\frac{a}{3}, b\right)$$

A

$$g(x) = 3f(-x)$$

B

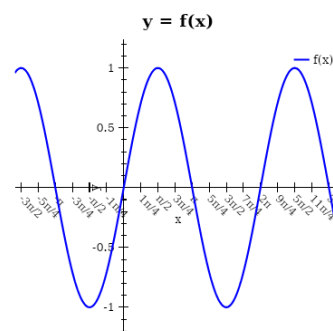
$$g(x) = -f(3x)$$

C

$$g(x) = f(-3x)$$

8

Which function would have a graph with this phase shift?



A

$$f(x) = \cos\left(x - \frac{7}{6}\pi\right)$$

B

$$f(x) = \cos\left(x - \frac{2}{6}\pi\right)$$

C

$$f(x) = \cos\left(x - \frac{5}{6}\pi\right)$$

D

$$f(x) = \cos(x + 6\pi)$$

**Determine transformed equations from graphs****9**

What are the phase shift and period of this sinusoidal function?

$$f(x) = \sin\left(\frac{2}{11}x + \frac{6}{7}\right)$$

A

$$\text{Period} = \frac{22\pi}{2}$$

$$\text{Phase Shift} = \frac{6}{7} \text{ right}$$

B

$$\text{Period} = \frac{14\pi}{6}$$

$$\text{Phase Shift} = \frac{2}{11} \text{ left}$$

C

$$\text{Period} = \frac{22\pi}{2}$$

$$\text{Phase Shift} = \frac{6}{7} \text{ left}$$

D

$$\text{Period} = \frac{22}{2}$$

$$\text{Phase Shift} = \frac{6}{7} \text{ left}$$

10

What are the period, phase shift, and vertical shift of this sinusoidal function?

$$f(x) = \sin\left(\frac{8}{3}\pi x + \frac{2}{11}\right) + \frac{6}{5}$$

A

$$\text{Period} = \frac{6}{8}$$

$$\text{Phase Shift} = \frac{6}{5} \text{ left}$$

$$\text{Vertical Shift} = \frac{2}{11}$$

B

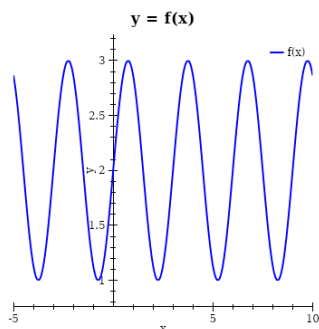
$$\text{Period} = \frac{6}{8}$$

$$\text{Phase Shift} = \frac{2}{11} \text{ left}$$

$$\text{Vertical Shift} = \frac{6}{5}$$

**Determine transformed equations from graphs****11**

Which function would have a graph with this period?



A

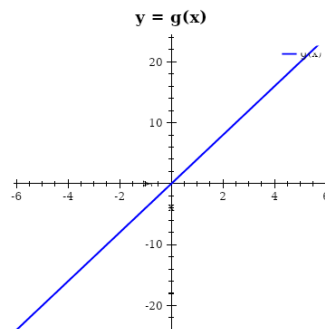
$$f(x) = \cos\left(\frac{4}{3}\pi x\right) + 2$$

B

$$f(x) = \cos\left(\frac{2}{3}\pi x\right) + 2$$

C

$$f(x) = \cos\left(\frac{5}{3}\pi x\right) + 2$$

12Which transformed function $g(x)$ is this graph showing?

A

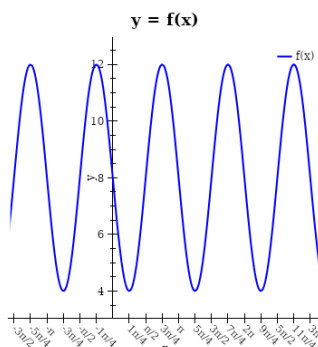
$$f(x) = x$$
$$g(x) = 4f(x)$$

B

$$f(x) = x$$
$$g(x) = f(4x)$$

13

Which function would have a graph with this phase shift?



A

$$f(x) = 4\cos\left(2x + \frac{1}{6}\pi\right) + 8$$

B

$$f(x) = 4\cos\left(2x - \frac{4}{6}\pi\right) + 8$$

C

$$f(x) = 4\cos(2x + 3\pi) + 8$$

D

$$f(x) = 4\cos\left(2x - \frac{8}{6}\pi\right) + 8$$