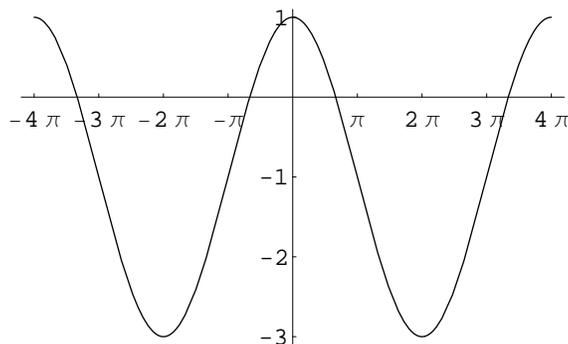# Math Xb—Spring 2004

Graphs of Sine, Cosine, and Tangent

1. Choose the function that best fits the following graph.

(a) $\dfrac{1}{2}\cos(2x) - 1$

(b) $2\cos\left(\dfrac{1}{2}x\right) - 1$

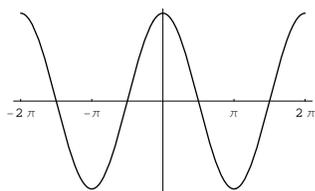(c) $\dfrac{1}{2}\cos\left(\dfrac{1}{2}x\right) - 1$

(d) $2\cos(2x) - 1$
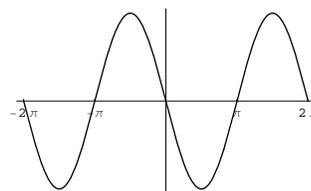
(e) None of the above.

2. Choose the graph that best fits the function

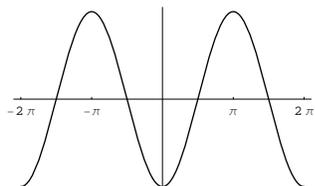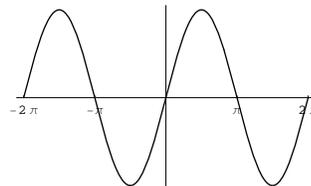$$f(x) = -\cos\left(x - \dfrac{\pi}{2}\right).$$
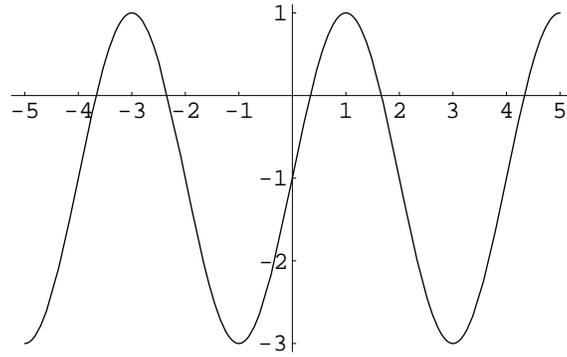
(a)

(c)

(b)

(d)

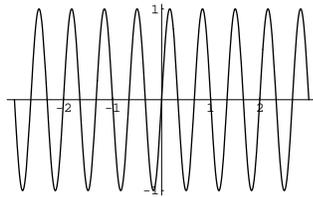3. Choose the function that best fits the following graph.

(a) $2\sin\left(\dfrac{2\pi}{x}\right) - 1$

(b) $2\sin\left(2\pi x\right) - 1$

(c) $2\sin\left(\dfrac{2}{\pi}x\right) - 1$

(d) $2\sin\left(\dfrac{\pi}{2}x\right) - 1$
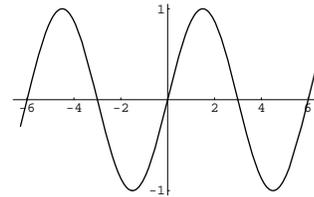
(e) None of the above.

4. Choose the graph that best fits the function
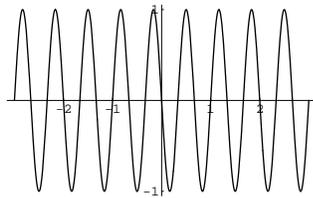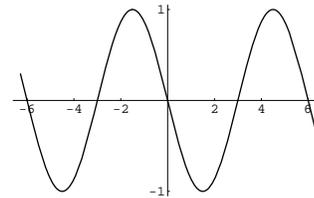
$$f(x) = \sin\left(\frac{\pi}{3}x\right).$$
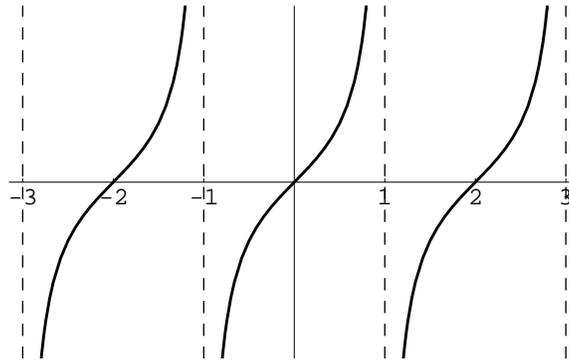
(a)

(c)

(b)

(d)

5. Choose the function that best fits the following graph.

(a) $\tan\left(\dfrac{\pi}{2}x\right)$

(b) $\tan\left(\dfrac{2}{\pi}x\right)$
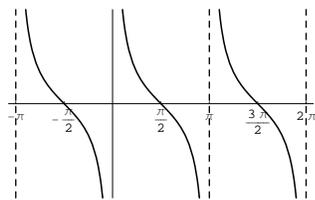
(c) $\tan\left(\dfrac{\pi}{4}x\right)$

(d) $\tan(2\pi x)$

(e) None of the above.

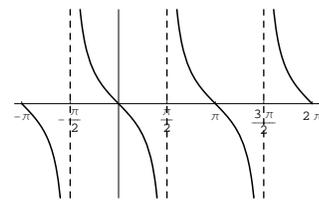6. Choose the graph that best fits the function

$$f(x) = \tan\left(x - \frac{\pi}{2}\right).$$
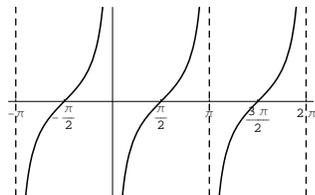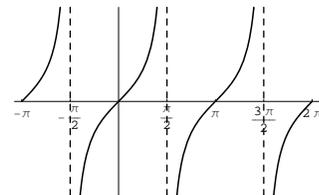
(a)

(c)

(b)

(d)

3

Answers

1. b   2. c   3. d   4. c   5. a   6. d