Name_____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Determine the amplitude or period as requested.

1) Amplitude of $y = 3 \sin x$

   A) 2π B) $\dfrac{\pi}{3}$ C) 3   D) 3π

2) Amplitude of $y = -\dfrac{1}{3} \sin x$

   A) $\dfrac{\pi}{3}$ B) $-\dfrac{1}{3}$ C) $\dfrac{1}{3}$ D) 3

3) Period of $y = \sin 3x$

   A) $\dfrac{2\pi}{3}$ B) 2π C) 3   D) 1

4) Period of $y = -3 \sin 4\pi x$

   A) 4π B) $\dfrac{\pi}{2}$ C) $\dfrac{1}{2}$ D) 2

5) Period of $y = 9 \sin\left(5x - \dfrac{\pi}{2}\right)$

   A) $\dfrac{2\pi}{5}$ B) $\dfrac{5\pi}{2}$ C) $\dfrac{5}{2}$ D) $\dfrac{2}{5}$

Determine the phase shift of the function.

6) $y = \dfrac{1}{4} \sin (5x + \pi)$

   A) $\dfrac{\pi}{4}$ units to the right   B) $-\dfrac{\pi}{5}$ units to the left

   C) $\dfrac{\pi}{5}$ units to the left   D) π units to the left

7) $y = -3 \sin\left(2x - \dfrac{\pi}{2}\right)$

   A) $\dfrac{\pi}{2}$ units to the left   B) 3π units up

   C) $\dfrac{\pi}{4}$ units to the right   D) 2π units down

Determine the amplitude or period as requested.

8) Amplitude of $y = -5 \cos \frac{1}{3}x$

    A) 5   B) $\frac{\pi}{5}$ C) 6π D) $\frac{5\pi}{3}$

9) Period of $y = \cos 3x$

    A) $\frac{2\pi}{3}$ B) 3   C) 1   D) 2π

10) Period of $y = -3 \cos \frac{1}{2}x$

    A) $\frac{\pi}{2}$ B) $\frac{3\pi}{2}$ C) -3   D) 4π

11) Period of $y = \frac{9}{8} \cos\left(-\frac{4\pi}{5}x\right)$

    A) $\frac{5}{2}$ B) $\frac{4}{9}$ C) $\frac{9\pi}{4}$ D) $\frac{8\pi}{5}$

Determine the phase shift of the function.

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

    A) $\frac{\pi}{2}$ units to the right   B) $\frac{\pi}{2}$ units to the left

    C) 4 units down   D) 4 units up

13) $y = -2 \cos (8x + \pi)$

    A) 2π units to the right   B) $\frac{\pi}{8}$ units to the left

    C) $\frac{\pi}{2}$ units to the left   D) 8π units to the right

14) $y = -5 \cos\left(\frac{1}{4}x + \frac{\pi}{4}\right)$

    A) $\frac{\pi}{4}$ units to the left   B) $\frac{\pi}{16}$ units to the right

    C) 5π units to the right   D) π units to the left

15) $y = 4 \cos\left(-2x - \dfrac{\pi}{3}\right)$

A) $\dfrac{\pi}{3}$ units to the left

B) $\dfrac{\pi}{6}$ units to the right

C) $\dfrac{\pi}{3}$ units to the right

D) $\dfrac{\pi}{6}$ units to the left
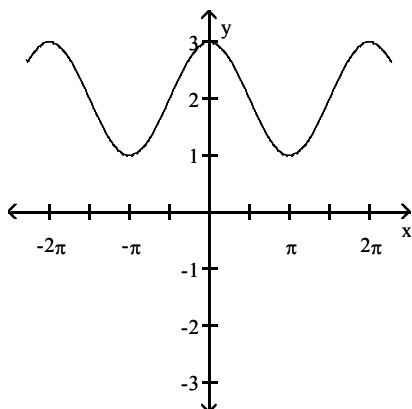
Use a vertical shift to graph the function.
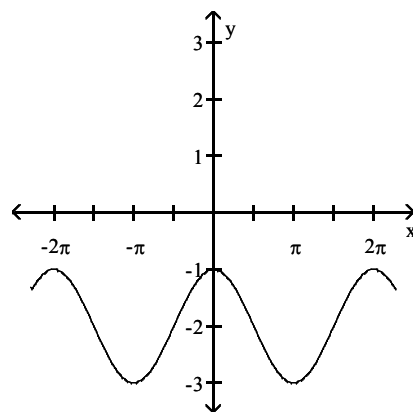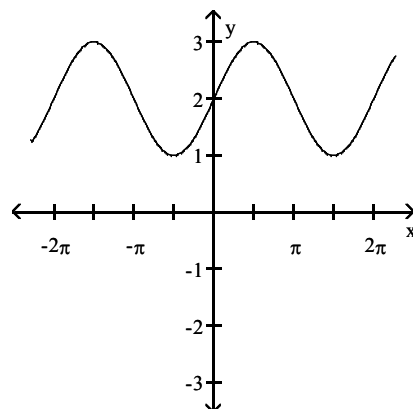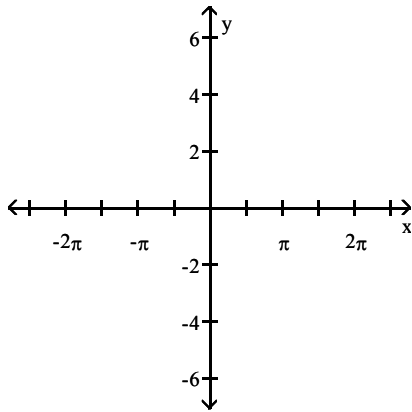
16) $y = 2 + \sin x$

A)

B)

C)
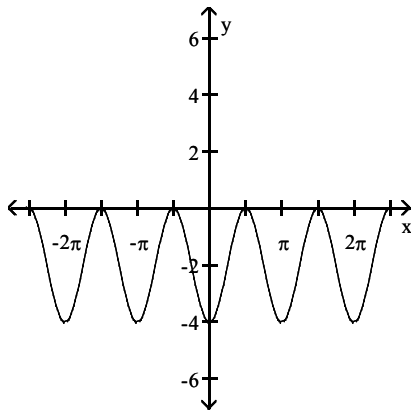

D)
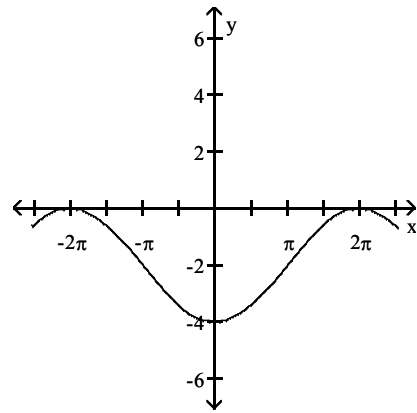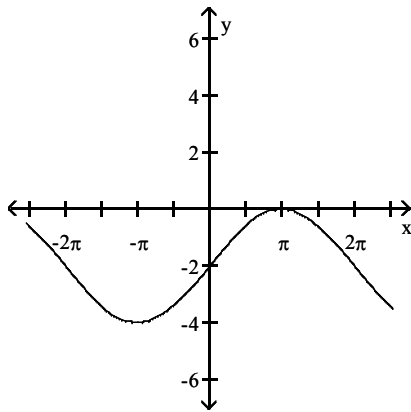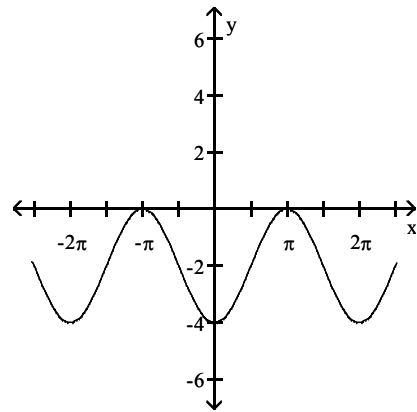
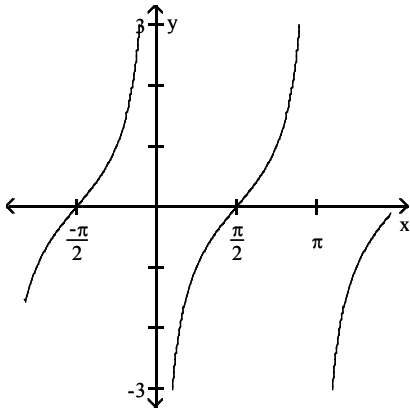17) $y = -2 \cos \frac{1}{2}x - 2$

A)

B)

C)
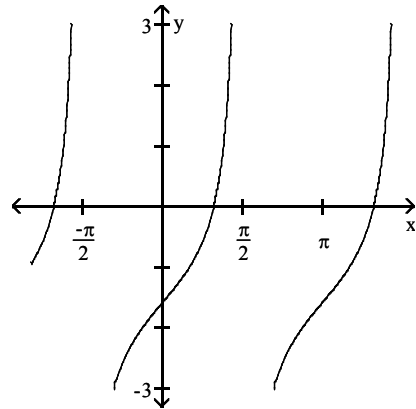

D)

4
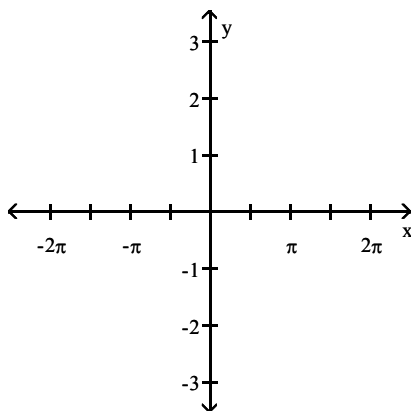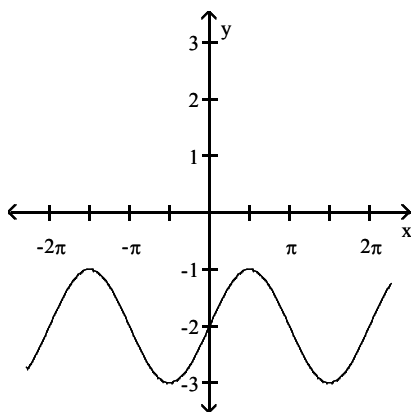
Match the function to its graph.
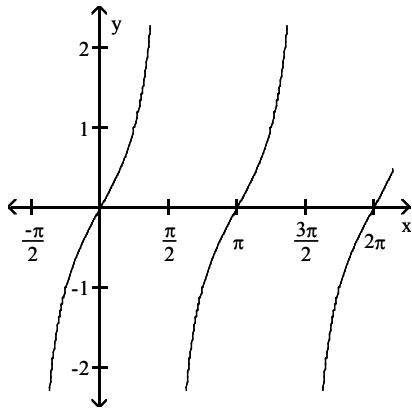
18) $y = -\tan\left(x - \dfrac{\pi}{2}\right)$

A)

B)

C)

D)
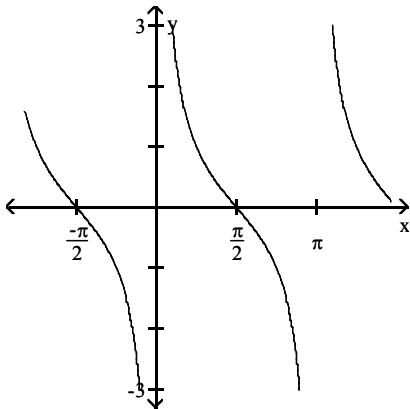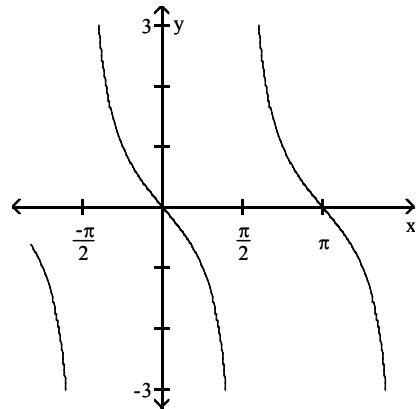
Find the exact value of the expression.

19) $\sin^{-1}\dfrac{\sqrt{3}}{2}$

A) $\dfrac{3\pi}{4}$ B) $\dfrac{\pi}{3}$ C) $\dfrac{\pi}{4}$ D) $\dfrac{2\pi}{3}$

20) $\cos^{-1}\left(-\dfrac{\sqrt{2}}{2}\right)$

A) $\dfrac{3\pi}{4}$ B) $\dfrac{\pi}{4}$ C) $\dfrac{-3\pi}{4}$ D) $\dfrac{-\pi}{4}$

21) $\tan^{-1}1$

A) $\dfrac{2\pi}{3}$ B) $\dfrac{\pi}{4}$ C) $\dfrac{5\pi}{4}$ D) $\dfrac{\pi}{3}$

Use a calculator to find the value of the expression rounded to two decimal places.

22) $\tan^{-1}(1.8)$

A) 29.05   B) 60.95   C) 1.06   D) 0.51

Graph the function.
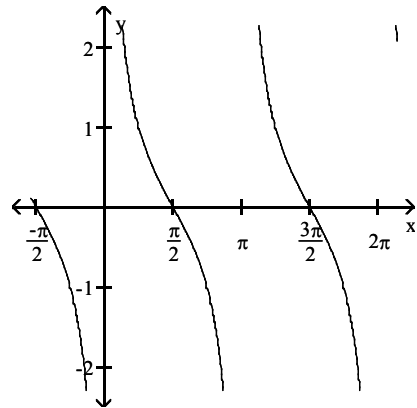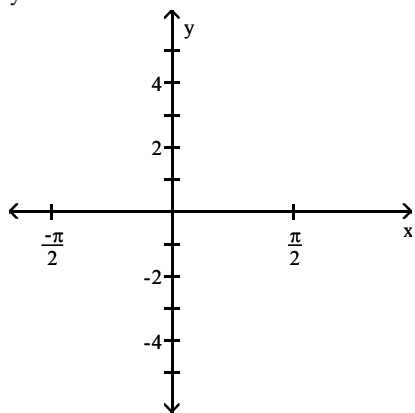
23) $y = \tan\left(x + \dfrac{\pi}{2}\right)$

A)

B)

C)

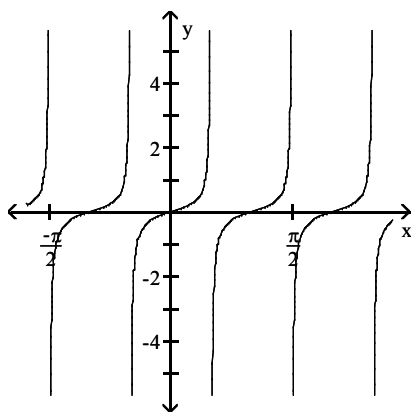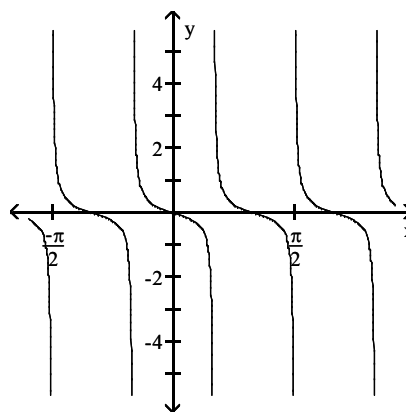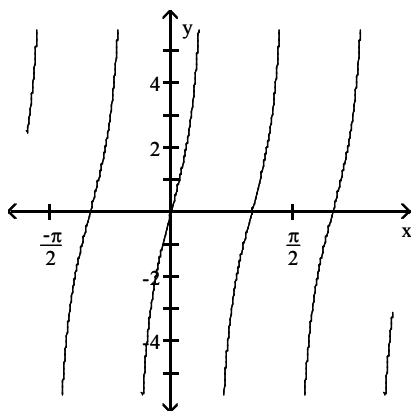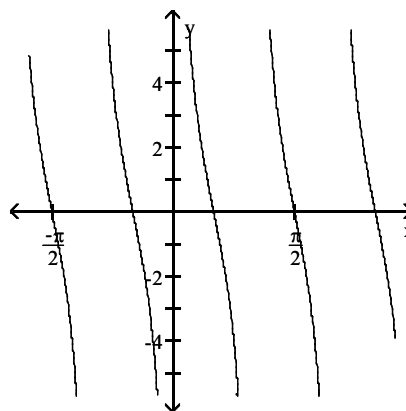
D)
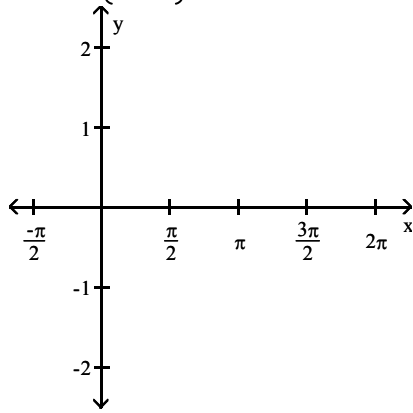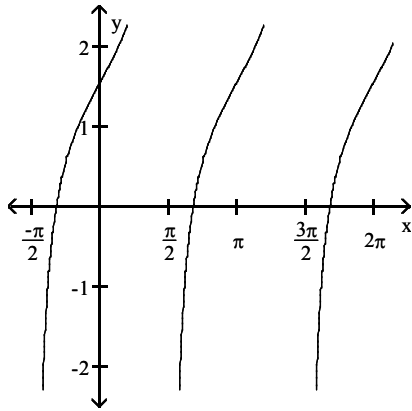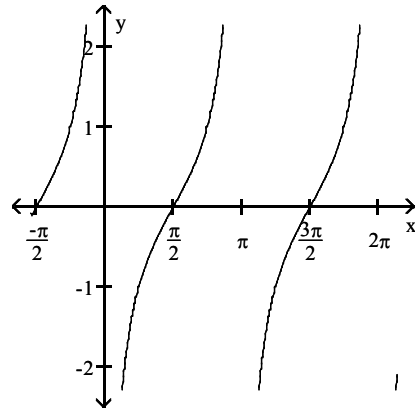
24) y = 4 cot 3x

A)

B)

C)

D)

Use a sketch to find the exact value of the expression.

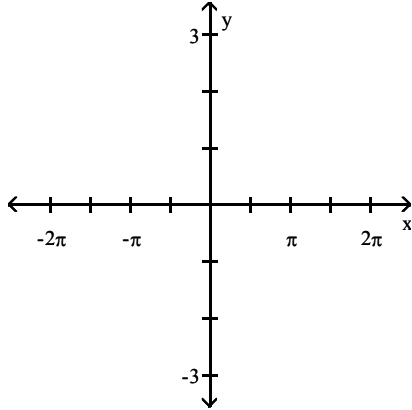25) $\cos\left(\sin^{-1}\dfrac{3}{5}\right)$

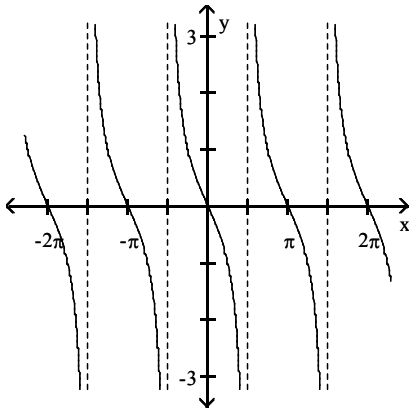A) $-\dfrac{3}{5}$

B) $\dfrac{4}{5}$

C) $-\dfrac{4}{5}$

D) $\dfrac{1}{5}$
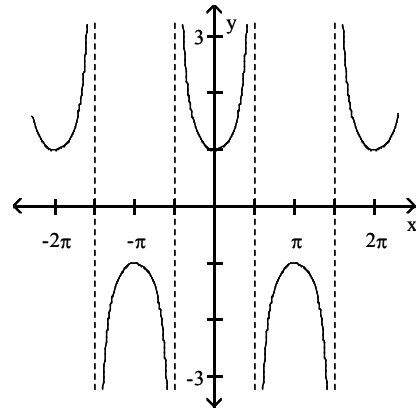
7

Graph the function.

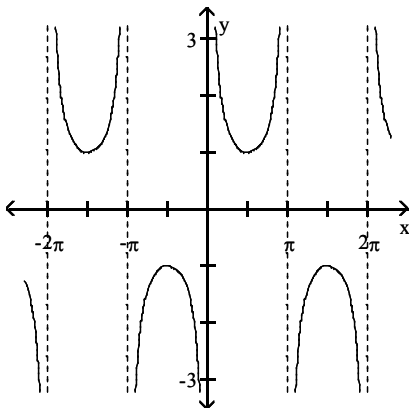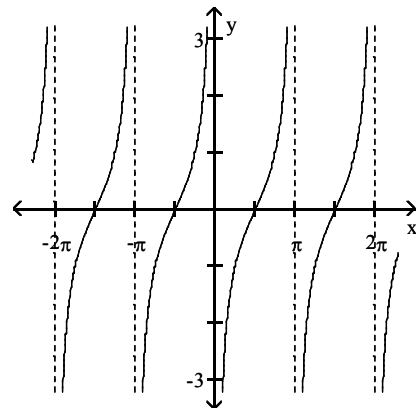26) y = csc x

A)

B)

C)

D)

Use a calculator to find the value of the expression rounded to two decimal places.

27) $\cos^{-1}\left(-\dfrac{\sqrt{6}}{5}\right)$

    A) 2.08   B) –0.51   C) –29.33   D) 119.33

Use a sketch to find the exact value of the expression.

28) $\csc\left(\tan^{-1}\dfrac{\sqrt{3}}{3}\right)$
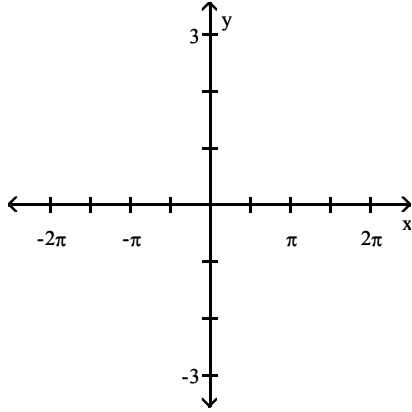
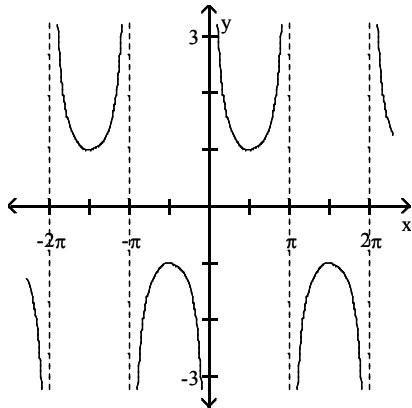   A) $\dfrac{1}{2}$ B) $\sqrt{3}$ C) 2   D) $\dfrac{2\sqrt{3}}{3}$
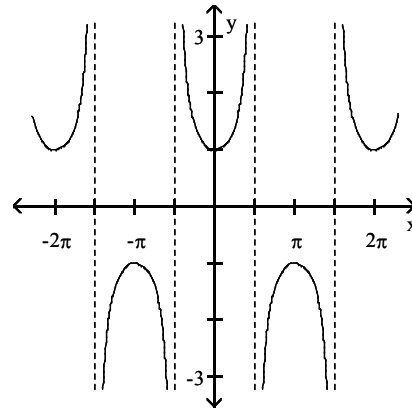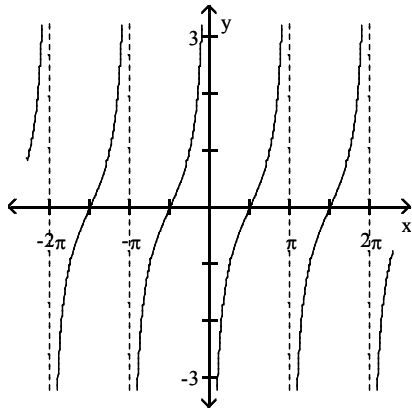
Graph the function.
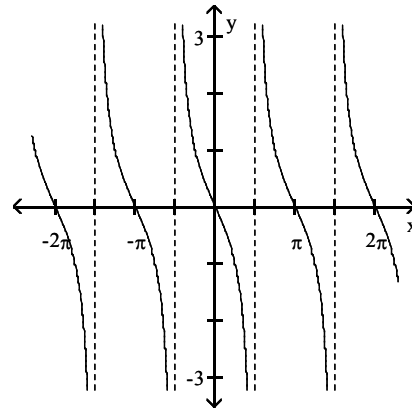
29) y = sec x

A)

B)

C)

D)

Find the exact value of the expression, if possible. Do not use a calculator.

30) $\tan^{-1}\left(\tan \dfrac{4\pi}{5}\right)$

A) $-\dfrac{\pi}{5}$ 　　　　 B) $\dfrac{6\pi}{5}$ 　　　　 C) $-\dfrac{6\pi}{5}$ 　　　　 D) $\dfrac{4\pi}{5}$

Answer Key
Testname: CH 4 PART 2 PRACTICE TEST

1) C
2) C
3) A
4) C
5) A
6) C
7) C
8) A
9) A
10) D
11) A
12) B
13) B
14) D
15) D
16) D
17) B
18) C
19) B
20) A
21) B
22) C
23) B
24) D
25) B
26) C
27) A
28) C
29) B
30) A