

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

Solve the equation for the indicated variable.

1) $q - 3x = 5q + 1$ for q

A) $\frac{-3x - 1}{5}$

B) $\frac{4q + 1}{-3}$

C) 1

D) $\frac{-3x - 1}{4}$

1) _____

Solve the formula for the specified variable.

2) $F = \frac{9}{5}C + 32$ for C

A) $C = \frac{5}{9}(F - 32)$

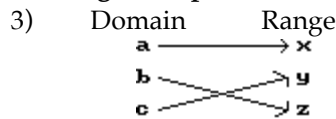
B) $C = \frac{5}{F - 32}$

C) $C = \frac{9}{5}(F - 32)$

D) $C = \frac{F - 32}{9}$

2) _____

Is the following correspondence a function?



A) Yes

B) No

3) _____

Find the function value.

4) $f(x) = (x + 5)^2$, find $f(5)$

A) 100

B) 20

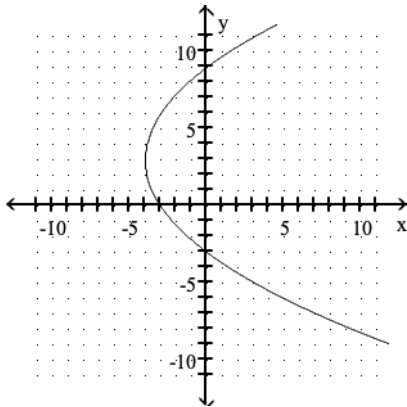
C) -100

D) 0

4) _____

Determine whether the following is the graph of a function.

5)



A) Yes

B) No

5) _____

Find the domain and range.

6) $f(x) = x^2 + 1$

A) Domain: All real numbers; range: $y > -1$

B) Domain: All real numbers; range: $y \geq 1$

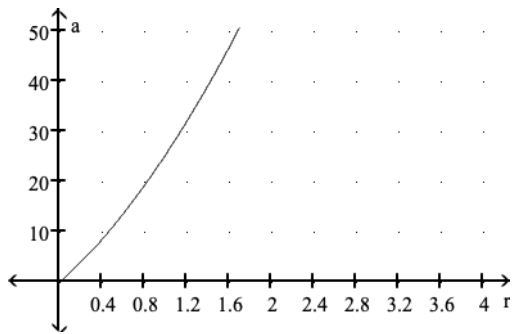
C) Domain: $x > -1$; range: All real numbers

D) Domain: $x > 1$; range: All real numbers

6) _____

Solve the problem.

- 7) The surface area a of a cylinder is shown in the graph below. What is the radius r if the surface area is 10 m^2 ? 7) _____



- A) 0.4 m B) 0.2 m C) 0.8 m D) 0.6 m

State the domain of the given function.

- 8) $f(x) = \frac{1}{x+2}$ 8) _____

- A) All real numbers B) All real numbers except -2
 C) All real numbers $x > 2$ D) All real numbers except 2

Use a calculator to find the function value.

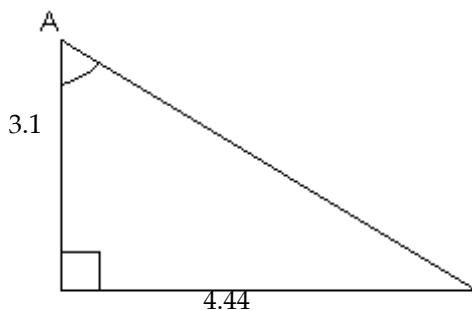
- 9) $\tan 427.97^\circ$ 9) _____
 A) 0.7804 B) 0.3751 C) 2.4714 D) -7.1426

Determine θ in decimal degrees. Round results to an appropriate number of significant digits.

- 10) $\sin \theta = 0.162$ 10) _____
 A) 9.0° B) 9° C) 12.0° D) 12°

Find the requested part of the triangle. Round your answer to two decimal places.

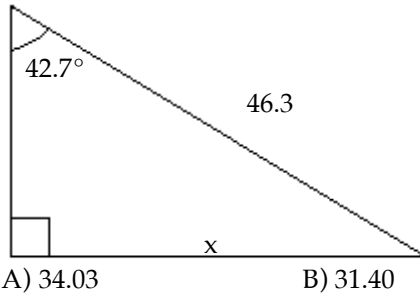
- 11) Find the measure of the angle A in degrees. 11) _____



- A) 56.38° B) 54.68° C) 34.92° D) 55.08°

12) Find the measure of the side labeled x.

12) _____



A) 34.03

B) 31.40

C) 32.60

D) 35.00

Evaluate the given expression.

13) $100^{1/2}$

13) _____

A) 50

B) $\frac{1}{50}$

C) 10

D) $\frac{1}{10}$

14) $(-125)^{5/3}$

14) _____

A) $-\frac{1}{3125}$

B) $-\frac{1}{5}$

C) -5

D) -3125

Find the inverse of the given function.

15) $y = 2x + 4$

15) _____

A) $y = \frac{x}{2} + 2$

B) $y = \frac{x}{2} - 4$

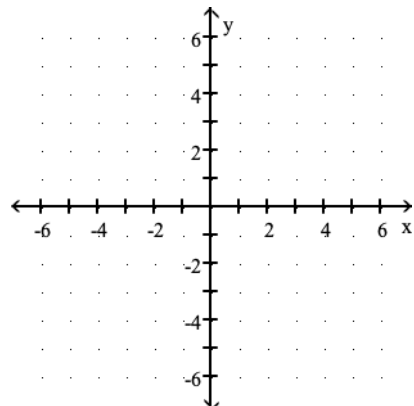
C) $y = 2x - 4$

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

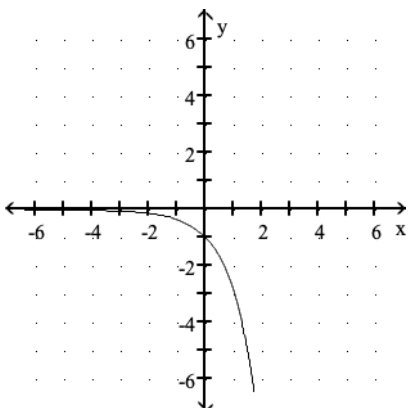
Graph the exponential function.

16) $y = 3^x$

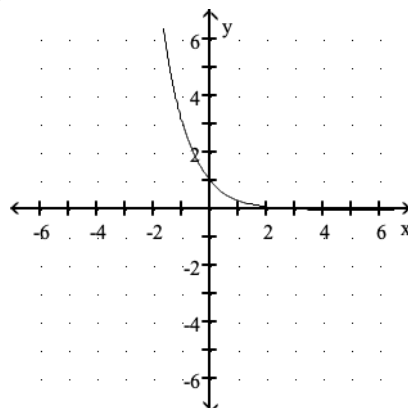
16) _____



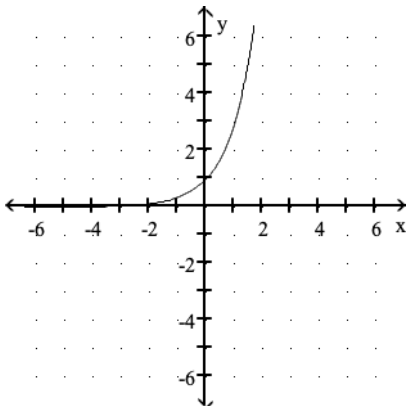
A)



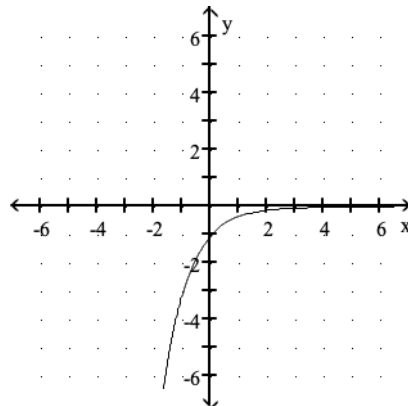
B)



C)



D)



Solve.

17) The amount of particulate matter left in solution during a filtering process is given by the equation $P = 900(2)^{-0.8n}$, where n is the number of filtering steps. Find the amounts left for $n = 0$ and $n = 5$. (Round to the nearest whole number.)

17) _____

A) 900, 14,400

B) 900, 56

C) 900, 28

D) 1800, 56

Convert to logarithmic form.

18) $3^5 = 243$

18) _____

A) $\log_{243} 3 = 5$

B) $\log_3 5 = 243$

C) $\log_5 243 = 3$

D) $\log_3 243 = 5$

Express the equation in exponential form.

19) $\log_5 25 = 2$

A) $2^5 = 25$

B) $5^{25} = 2$

C) $5^2 = 25$

D) $25^2 = 5$

19) _____

Solve.

20) $\left(\frac{1}{5}\right)^x = 25$

A) $-1/2$

B) -2

C) $1/2$

D) 2

20) _____

Solve the equation.

21) $2\ln x = 7$

A) 1.331

B) 2193.256

C) 3162.278

D) 33.115

21) _____

Use a calculator to solve the equation.

22) $9^{-x} = 6.057$

A) -1.8876

B) 0.3960

C) 0.8198

D) -0.8198

22) _____

Answer Key

Testname: MAT-064 MODULE 4 PRACTICE

- 1) D
- 2) A
- 3) A
- 4) A
- 5) B
- 6) B
- 7) A
- 8) B
- 9) C
- 10) A
- 11) D
- 12) B
- 13) C
- 14) D
- 15) D
- 16) C
- 17) B
- 18) D
- 19) C
- 20) B
- 21) D
- 22) D