

Quiz 1

For use after Lessons 1.1–1.3

Evaluate the expression.

1. $8 + a$ when $a = 5$
2. $27 - h$ when $h = 21$
3. $\frac{p}{4}$ when $p = 16$
4. $7 + y^2$ when $y = 3$
5. $\frac{2m + 9}{m}$ when $m = 2$
6. $\frac{3x}{x - 1}$ when $x = 3$

Translate the verbal phrase into an expression.

7. 10 more than $\frac{1}{2}$ of a number r
8. Twice a number d
9. The difference of 19 and t
10. The sum of a number p and the square of a number b

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Quiz 2*For use after Lessons 1.4–1.5***Write an equation or an inequality.**

1. The sum of twice a number d and 3 is 12.
2. Six less than four times a number j is 18.
3. The product of 8 and a number q is at least 32.
4. The difference of 10 and a number w is no more than 8.

In Exercises 5–8, check whether the given number is a solution of the equation or inequality.

5. $z - 4 = 9$; 12
6. $2x - 9 \geq 11$; 10
7. $k - 8.2 < 10$; 18
8. $4d + 1 < 13$; 3
9. What is the interest on \$950 invested for 4 years in an account that earns simple interest at a rate of 3% per year?
10. A car travels 210 miles in 3.5 hours. What is the average speed of the car?

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

CHAPTER 1 **Quiz 3**
For use after Lessons 1.6–1.7

Identify the domain and range of the function.

1.

Input	Output
0	1
2	5
4	9
6	13

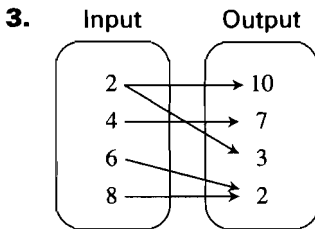
2.

Input	Output
1	2
2	5
3	8
4	11

Answers

1. _____
2. _____
3. _____
4. _____
5. See left.
6. See left.
7. _____
8. _____
9. _____

Tell whether the pairing is a function.

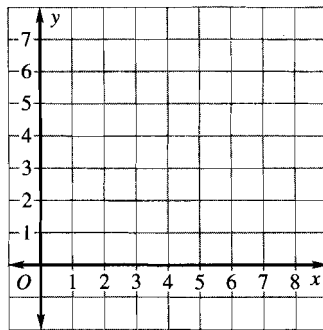
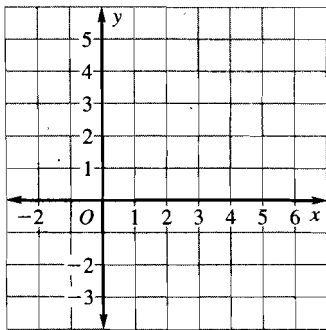


4.

Input	Output
3	5
4	7
5	9
6	11

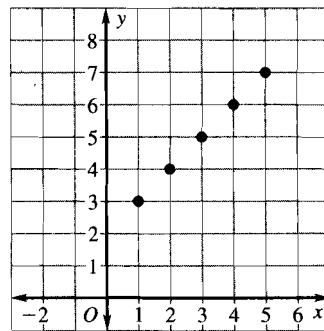
Graph the function.

5. $y = x - 2$; Domain: 2, 3, 4, 5, 6 6. $y = \frac{1}{2}x + 3$; Domain: 0, 2, 4, 6, 8



In Exercises 7–9, use the graph at the right.

7. Write a rule for the function represented by the graph.
8. Identify the domain of the function.
9. Identify the range of the function.



Chapter Test A

For use after Chapter 1

Evaluate the expression.

1. $12 - q$ when $q = 8$ 2. $3x$ when $x = 9$
 3. w^3 when $w = 2$ 4. $\frac{24}{t}$ when $t = 4$

Write the power as a product.

5. 10^4 6. $(2.6)^3$ 7. n^6
 8. The height of a horse is often measured in hands. You can estimate the height (in inches) of a horse by using the expression $4h$, where h is the number of hands. How tall is a horse that measures 14 hands?

Evaluate the expression.

9. $12 \div 3 - 1$ 10. $15 - 7 \cdot 2$
 11. $2 + 2^3 \div 4$ 12. $5(3^2 - 4)$

Translate the verbal phrase into an algebraic expression.

13. The sum of a number x and 9
 14. Six less than a number w squared
 15. The number of quarters in d dollars

Write an equation or an inequality.

16. Three more than twice a number b is equal to 13.
 17. The product of 5 and a number k is less than 60.

Check whether the given number is a solution of the equation or the inequality.

18. $10x - 3 = 27$; 3 19. $4y - 1 \geq 20$; 4
 20. $2x + 1 < 17$; 8 21. $4a - 7 = 3a - 4$; 3
 22. A bicycle travels at an average speed of 15 miles per hour. How many miles does the bicycle travel in 1.5 hours?

Answers

1. _____
 2. _____
 3. _____
 4. _____
 5. _____
 6. _____
 7. _____
 8. _____
 9. _____
 10. _____
 11. _____
 12. _____
 13. _____
 14. _____
 15. _____
 16. _____
 17. _____
 18. _____
 19. _____
 20. _____
 21. _____
 22. _____

CHAPTER 1 **Chapter Test A** *continued*
For use after Chapter 1

Tell whether the pairing is a function.

23.

Input	Output
0	3
5	7
10	7
15	11

24.

Input	Output
1	12
2	6
2	3
3	1.5

Make a table for the function. Identify the range of the function.

25. $y = 2x + 1$

Domain: 0, 1, 2, 3

Input, x				
Output, y				

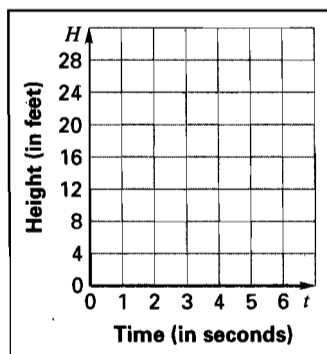
26. $y = 20 - 3x$

Domain: 0, 2, 4, 6

Input, x				
Output, y				

27. The table shows the height H (in feet) of an object as a function of the time t (in seconds) after being thrown vertically upward. Graph the function.

Time elapsed, t	0	1	2	3	4	5
Height, H	6	23	28	24	18	13



Answers

23. _____

24. _____

25. See left.

26. See left.

27. See left.

Chapter Test B

For use after Chapter 1

Evaluate the expression.

1. $34.5x$ when $x = 4$ 2. $\frac{1}{3}y$ when $y = \frac{9}{10}$

Evaluate the power.

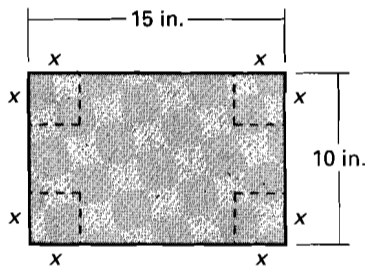
3. 5^4 4. 1^7 5. $\left(\frac{1}{2}\right)^5$
6. You can convert temperatures in degrees Fahrenheit to degrees Celsius by using the expression $\frac{9}{5}C + 32$, where C is the temperature (in degrees Celsius). Convert 35°C to degrees Fahrenheit.

Evaluate the expression.

7. $16 \div (4 - 2) - 3$ 8. $3[15 - (2^3 - 6)^2]$

Evaluate the expression for the given values of the variables.

9. $3m - n$ when $m = 5$ and $n = 4$
10. $2u^2 + v$ when $u = 3$ and $v = 7$
11. A rectangular box is created by cutting out squares of equal sides of lengths x from a piece of cardboard 10 inches by 15 inches and folding up the sides as shown in the figure. The volume of the box is given by $V = x(10 - 2x)(15 - 2x)$. Find the volume of the box when the side length of the square is 3 inches.

**Write an algebraic expression, an equation, or an inequality.**

12. The quotient of the square of a number t and 14
13. Amount you earn if you make 6.5 dollars an hour for h hours
14. The product of 6 and the quantity 2 more than a number x is at least 45.
15. The sum of 4 and the quotient of a number k and 9 is 12.

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

CHAPTER 1 **Chapter Test B** *continued*
For use after Chapter 1

Check whether the given number is a solution of the equation or the inequality.

16. $7z + 8 > 20$; 2

17. $\frac{r}{5} + 15 = 20$; 25

18. A carpet outlet advertises a price of \$470.40 to carpet a 12-foot by 16-foot room. If a customer was given a price of \$725.20 for carpeting a room that is 16 feet wide, what is the length of the room?

Write a rule for the function.

19.

Input, x	1	3	5	7
Output, y	2	6	10	14

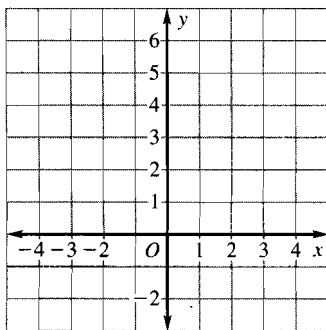
20.

Input, x	12	15	18	21
Output, y	4	5	6	7

Find the range of the function. Then graph the function.

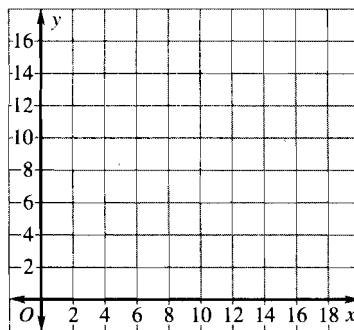
21. $y = \frac{1}{2}x + 3$

Domain: 0, 1, 2, 3, 4



22. $y = x - 6$

Domain: 10, 12, 14, 16, 18



Answers

16. _____

17. _____

18. _____

19. _____

20. _____

21. _____

See left.

22. _____

See left.

Chapter Test C

For use after Chapter 1

Evaluate the expression for the given value of the variable.

1. n^3 when $n = \frac{2}{3}$

2. $\frac{x}{y}$ when $x = 6$ and $y = \frac{1}{2}$

3. You can estimate your distance (in miles) from a thunderstorm by using the expression $\frac{t}{4.8}$, where t is the number of seconds between seeing the lightning and hearing the thunder. How far away is the thunderstorm, if 24 seconds after you see the lightning you hear the thunder?

Evaluate the expression.

4. $[15 + (5^2 \cdot 2)] \div 13$

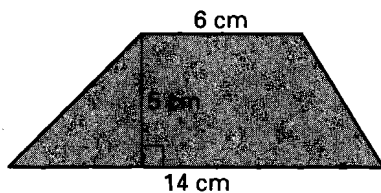
5. $\frac{(37 - 26)^2 - 6}{32 \div 2^2 - (4^2 - 13)}$

Evaluate the expression.

6. $8 + 4(q - 3) + q$ when $q = 6$

7. $\frac{2m - n}{m^2 - 2n + 2}$ when $m = 5$ and $n = 3$

8. The formula for the area of a trapezoid is one-half the product of the sum of the bases times the height. Find the area of the trapezoid below.

**Write an equation or an inequality.**

9. The quotient of a number x and 11 is at least 2 less than the number x .
10. The product of 5 and a number n plus 7 is fewer than the quotient of the number n and 2.
11. Three times the sum of 4 and a number y squared is the same as the difference of 14 and the number y .
12. The quotient of the difference of a number w cubed and 9 and 3 is more than the difference of 12 and the product of 2 and the number w .

Check whether the given number is a solution of the equation or inequality.

13. $\frac{x-1}{2} + 5 > x + 1$; 8

14. $3(x - 7) = 19 - x$; 10

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

