

Test, Form 2A

Write the letter for the correct answer in the blank at the right of each question.

1. Which of the following statements is true?
 A. $2 < -3$ B. $-4 < -5$ C. $-4 > -5$ D. $-3 > 2$ 1. _____

2. Which set of integers is graphed on the number line?

-3 -2 -1 0 1 2 3 4 5

 F. $\{3, -1, 2\}$ G. $\{-3, 1, -2\}$ H. $\{-3, -1, 2\}$ I. $\{-2, -1, 3\}$ 2. _____

3. Which expression has the greatest value?
 A. $-|-16|$ B. $|-14|$ C. $-|-12|$ D. $|10|$ 3. _____

4. What is the value of the expression $|-36| + |7|$?
 F. -43 G. -29 H. 29 I. 43 4. _____

5. Which integer best represents a withdrawal of \$85?
 A. 85 B. -85 C. $|85|$ D. $|-85|$ 5. _____

6. Write $-\frac{5}{11}$ as a decimal.
 F. $-0.\overline{4}$ G. $-0.\overline{45}$ H. -0.48 I. -4.5 6. _____

7. Order -3.98 , $3\frac{8}{9}$, $-3\frac{11}{12}$, and $3.\overline{9}$ from least to greatest.
 A. $3.\overline{9}$, -3.98 , $-3\frac{11}{12}$, $3\frac{8}{9}$ C. -3.98 , $-3\frac{11}{12}$, $3\frac{8}{9}$, $3.\overline{9}$
 B. -3.98 , $3.\overline{9}$, $-3\frac{11}{12}$, $3\frac{8}{9}$ D. -3.98 , $-3\frac{8}{9}$, $-3\frac{11}{12}$, $3.\overline{9}$ 7. _____

8. What is the opposite of -132 ?
 F. -132 G. 132 H. 0 I. 6 8. _____

9. Which integer represents a gain of 7 yards on a play?
 A. $+7$ B. $+5$ C. -5 D. -7 9. _____

10. Which situation is *not* best described by a negative integer?
 F. a withdrawal of \$45 H. a loss of 12 yards
 G. a fine of \$15 I. a bonus of 10 points 10. _____

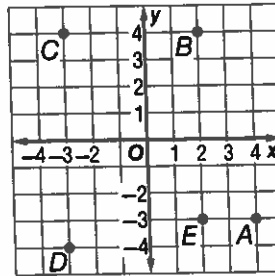
11. Jolene scored 21 goals over the past 18 lacrosse games. What was her average number of goals scored per game expressed as a decimal?
 A. 1.15 C. $1.1\overline{6}$
 B. $1.16\overline{7}$ D. $2.1\overline{6}$ 11. _____

Test, Form 2A *(continued)*

For Exercises 12 and 13, use the coordinate plane below.

12. Which of the following correctly identifies the point for the ordered pair $(-3, 4)$?

F. point A H. point C
G. point B I. point D



12. _____

13. Which of the following ordered pairs correctly names point E ?

A. $(-2, 3)$ C. $(-3, 2)$
B. $(2, -3)$ D. $(3, -2)$

13. _____

14. Which of the following correctly identifies the quadrant where the point named by $(9, 3)$ is located?

F. Quadrant I H. Quadrant III
G. Quadrant II I. Quadrant IV

14. _____

Graph each point on a coordinate plane.

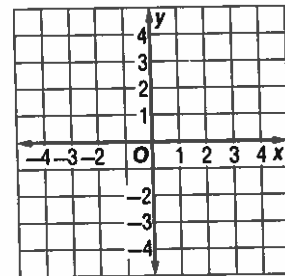
15. $N(4, 1)$

16. $P(-2, -3)$

17. $Q(3, -2)$

18. $R(-1, 2)$

15–18.



Replace each \bullet with $<$, $>$, or $=$ to make a true sentence.

19. $2 \bullet -3$

19. _____

20. $-6 \bullet -4$

20. _____

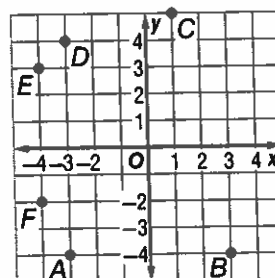
For Exercises 21–24, use the coordinate plane below.

21. Identify the point for the ordered pair $(3, -4)$.

22. Write the ordered pair that names point C .

23. Write the ordered pair that names point F .

24. Write the ordered pair that represents the reflection of point F across the y -axis.



21. _____

22. _____

23. _____

24. _____

Lesson 5 Skills Practice**Compare and Order Fractions, Decimals, and Percents**

Replace each ● with <, >, or = to make a true statement.

1. $\frac{2}{3}$ ● $\frac{3}{4}$

2. $\frac{3}{8}$ ● $\frac{6}{16}$

3. $\frac{5}{8}$ ● $\frac{7}{12}$

4. $\frac{1}{2}$ ● $\frac{6}{7}$

5. $\frac{3}{9}$ ● $\frac{1}{3}$

6. $\frac{1}{6}$ ● 0.9

7. $\frac{5}{6}$ ● $\frac{7}{8}$

8. $\frac{5}{8}$ ● $\frac{5}{12}$

9. $\frac{4}{5}$ ● $\frac{2}{3}$

10. $\frac{6}{7}$ ● 80%

11. $\frac{5}{12}$ ● $\frac{3}{16}$

12. 0.75 ● $\frac{2}{9}$

13. $\frac{5}{7}$ ● 0.7

14. $\frac{2}{15}$ ● $\frac{1}{6}$

15. $\frac{5}{12}$ ● $\frac{2}{5}$

16. $2\frac{3}{10}$ ● $2\frac{5}{14}$

17. $5\frac{4}{9}$ ● $5\frac{3}{7}$

18. $1\frac{3}{5}$ ● $1\frac{5}{9}$

19. $4\frac{1}{6}$ ● $4\frac{2}{12}$

20. $1\frac{7}{9}$ ● $1\frac{4}{7}$

21. 8.9 ● $8\frac{11}{12}$

22. $3\frac{1}{4}$ ● 3.25

23. $6\frac{8}{9}$ ● $6\frac{7}{8}$

24. $11\frac{2}{9}$ ● $11\frac{4}{15}$

Order the fractions from least to greatest.

25. $\frac{3}{4}, \frac{2}{5}, \frac{5}{8}, \frac{1}{2}$

26. $\frac{1}{3}, \frac{2}{7}, \frac{3}{14}, \frac{1}{6}$

27. $\frac{2}{3}, \frac{4}{9}, \frac{5}{6}, \frac{7}{12}$

28. $\frac{4}{5}, \frac{2}{3}, \frac{13}{15}, \frac{7}{9}$

29. $8\frac{11}{12}, 8\frac{5}{6}, 8\frac{3}{4}, 8\frac{9}{16}$

30. $2\frac{7}{15}, 2\frac{3}{5}, 2\frac{5}{12}, 2\frac{1}{2}$

Lesson 5 Problem-Solving Practice

Compare and Order Fractions, Decimals, and Percents

- 1. SHOES** Toya is looking in her closet. Use the table to determine whether she has more black shoes or more brown shoes. Explain.

Shoe Color	Fraction of Shoes
Black	$\frac{1}{3}$
Brown	$\frac{2}{5}$
Gray	$\frac{4}{15}$

- 2. BUDGET** Daniel spends $\frac{3}{7}$ of his money on rent and $\frac{4}{9}$ of his money on food. Does he spend more money on food or rent? Explain.

- 3. WOODWORKING** Gabrielle drilled a hole that is $\frac{5}{9}$ inch wide. She has a screw that is $\frac{5}{6}$ inch wide. Is the hole wide enough to fit the screw? Explain.

- 4. FOOD** In a recent survey, 0.4 of the people surveyed said their favorite food was pizza, 25% said it was hot dogs, and $\frac{3}{10}$ said it was popcorn. Which food was favored by the greatest number of people? Explain.

- 5. OFFICE SUPPLIES** A blue paper clip is $\frac{1}{6}$ inch wide. A silver paper clip is $\frac{3}{8}$ inch wide, and a red paper clip is $\frac{1}{3}$ inch wide. What color paper clip has the smallest width? Explain.

- 6. GUMBALLS** A red gumball is $2\frac{5}{8}$ inches across. A green gumball is $2\frac{5}{6}$ inches across, and a blue gumball is $2\frac{7}{9}$ inches across. List the gumballs in order from smallest to largest.

Lesson 7 Skills Practice

Ratio and Rate Problems

Solve.

- 1. GUACAMOLE** Eli is making guacamole. He uses 2 tablespoons of cilantro for every 3 avocados. At this rate, how many tablespoons of cilantro will he need for 9 avocados?
- 2. MARBLES** The ratio of blue marbles to white marbles in a bag is 4 to 5. At this rate, how many blue marbles are there if there are 15 white marbles?
- 3. FERTILIZER** Ellie must mix 6 tablespoons of plant food for every 2 gallons of water. If she has 6 gallons of water, how much plant food should she use?
- 4. STRAWBERRIES** At a local fruit stand, Luisa spends \$3.96 for 2 pounds of strawberries. How much can she expect to pay for 4 pounds of strawberries?
- 5. POGO STICK** On her pogo stick, Lula made 24 hops in 30 seconds. At this rate, how many hops will she make in 50 seconds?
- 6. TESTS** On a test, Matilda answered 12 out of the first 15 problems correctly. If this rate continues, how many of the next 25 problems will she answer correctly?
- 7. SOCCER** The Hawks soccer team won 12 out of 14 games. If this rate continues, how many games will they win if they play a total of 21 games?
- 8. VEGETABLES** At a harvest, 16 ears of corn are being picked for every 18 peppers. If 9 peppers have been picked, how many ears of corn have been picked?
- 9. CONSTRUCTION** At a road work site, 20 cones are placed along 50 feet of road. How many cones are placed along 35 feet of road?



Lesson 3 Homework Practice

Algebra: Variables and Expressions

Evaluate each expression if $m = 6$ and $n = 12$.

1. $m + 5$

2. $n - 7$

3. $m \cdot 4$

4. $m + n$

5. $n - m$

6. $12 \div n$

7. $9 \cdot n$

8. $n \div m$

9. $2m + 5$

10. $4m - 17$

11. $36 - 6m$

12. $3n + 8$

Evaluate each expression if $a = 9$, $b = 3$, and $c = \frac{1}{3}$.

13. $a^2 \div 3$

14. $15b + a^2$

15. $b^2 + 4 \cdot 6$

16. $a^2 - 2b^2$

17. $a^2 + 30 - 18$

18. $b^2 + 5a - 20$

19. $b^3 + c$

20. $19 + 6a \div 2$

21. $4b^2 \cdot 3$

22. $3c \div (2b^2)$

23. $a^2 - (3c)$

24. $ac \div (2b)$

25. **ANIMALS** A Gentoo penguin can swim at a rate of 17 miles per hour. How many miles can a penguin swim in 4 hours? Use the expression rt , where r represents rate and t represents time.

26. **CLOTHING** A company charges \$6 to make a pattern for an order of T-shirts and \$11 for each T-shirt it produces from the pattern. The expression $\$11n + \6 represents the cost of n T-shirts with the same pattern. Find the total cost for 5 T-shirts with the same pattern.

Lesson 4 Skills Practice

Algebra: Write Expressions

Define a variable. Then write each phrase as an algebraic expression.

1. one more ball than is on the playground
2. three more cookies than are in the jar
3. twelve fewer questions than were on the first test
4. eight dollars more than the shirt costs
5. three times as many drinks on the tray
6. five dollars less than Yumi's pay
7. The English class has half as many students as the math class.
8. one third of Emily's age
9. ten times the minutes spent exercising
10. **MAIL** Spencer bought 3 books of stamps and mailed a package. It cost \$4.50 to mail the package. Define a variable and write an expression to represent the total amount he spent at the post office.

Lesson 1 Homework Practice

Function Tables

Complete each function table.

1.

Input (x)	$x + 6$	Output (y)
0		
3		
7		

2.

Input (x)	$x - 1$	Output (y)
1		
4		
8		

3.

Input (x)	$3x + 2$	Output (y)
0		
2		
4		

4.

Input (x)	$x \div 2$	Output (y)
4		
8		
10		

Find the input for each function table.

5.

Input (x)	$x \div 4$	Output (y)
		1
		2
		4

6.

Input (x)	$x \div 2$	Output (y)
		1
		3
		5

7.

Input (x)	$x - 8$	Output (y)
		0
		2
		3
		5
		8

8.

Input (x)	$3x + 3$	Output (y)
		3
		6
		9
		12
		15

9. **FOOD** A pizza place sells pizzas for \$7 each plus a \$4 delivery charge per order. If Pat orders 3 pizzas to be delivered, what will be his total cost?

10. **MOVIES** A store sells used DVDs for \$8 each and used videotapes for \$6 each. The function rule $8d + 6v$ can be used to represent the total selling price of DVDs d and videotapes v . Then use the function rule to find the price of 5 DVDs and 3 videotapes.

Lesson 1 Skills Practice

Function Tables

Complete each function table.

1.

Input (x)	$x + 3$	Output (y)
0		
2		
4		

2.

Input (x)	$3x + 1$	Output (y)
0		
1		
2		

3.

Input (x)	$2x - 1$	Output (y)
7		
5		
4		

4.

Input (x)	$x \div 3$	Output (y)
12		
9		
6		

5. If a function rule is $2x - 3$, what is the output for the input 3?

6. If a function rule is $4 - x$, what is the output for the input 2?

Find the input for each function table.

7.

Input (x)	$x - 3$	Output (y)
		7
		4
		1

8.

Input (x)	$x + 9$	Output (y)
		12
		15
		17

9.

Input (x)	$5x$	Output (y)
		0
		10
		15

10.

Input (x)	$x \div 2$	Output (y)
		2
		3
		6

11.

Input (x)	$2x + 2$	Output (y)
		4
		6
		8

12.

Input (x)	$3x - 1$	Output (y)
		14
		8
		5