

Test, Form 2A

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

1. **MUSIC** At a concert, you purchase 3 T-shirts and a concert program for a total cost of \$90. The program cost \$15 and the T-shirts all cost the same. What is the cost of one T-shirt.
- A. \$90 B. \$75 C. \$25 D. \$15 1. _____

For Exercises 2 and 3, which property is shown by each statement?

2. $0 \cdot (-11) = 0$
- F. Additive Identity H. Multiplicative Identity
 G. Distributive Property I. Multiplicative Property of Zero 2. _____

3. $(m + n)(1) = m + n$
- A. Additive Identity C. Multiplicative Identity
 B. Associative Property D. Multiplicative Property of Zero 3. _____

4. **BABYSITTING** Mistrella charges \$5.90 per hour to babysit. Mr. and Mrs. Kellogg asked her to watch their daughter for 5 hours. Which answer is the best choice to find out how much Mr. and Mrs. Kellogg owe Mistrella using the Distributive Property?
- F. $5(\$6 - \$0.10)$ H. $5(\$5 + \$0.90)$
 G. $5(\$6 + \$0.10)$ I. $5(\$7 - \$1.10)$ 4. _____

For Exercises 5 and 6, which represents each expression in simplest form?

5. $-7b + 2 - 3b - 5$
- A. $10b + 3$ B. $-10b + 3$ C. $10b - 3$ D. $-10b - 3$ 5. _____

6. $-x - y - z + z + y + x$
- F. $-2x - 2y - 2z$ H. 0
 G. 1 I. $2x + 2y + 2z$ 6. _____

7. **CLOCKS** The second hand on a clock ticks 60 times per minute. How many times does it tick in a year? Solve using the *solve a simpler problem* strategy.
- A. 31,536,000 B. 604,800 C. 86,400 D. 3,600 7. _____

Test, Form 2A *(continued)*

For Exercises 8 and 9, what is the solution of each equation?

8. $-5x = -40 + 3x$
 F. 20 G. 5 H. -5 I. -20 8. _____

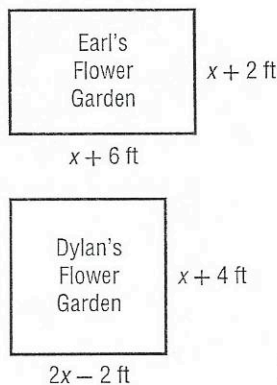
9. $3(v - 4) = -2(-5 + 4v)$
 A. 4 B. 2 C. -2 D. -4 9. _____

10. What is the solution of the equation $-2(y - 4) = 20 - 2y - 12$?
 F. 4 G. -4 H. -12 I. all numbers 10. _____

11. What is the solution of the inequality $-4x + 6 > 30$?
 A. $x < -6$ B. $x > -6$ C. $x < -9$ D. $x > -9$ 11. _____

12. **TESTS** Mabel scored 19 points more on her pre-algebra test than Nancy. Phoebe scored 10 points less on her pre-algebra test than Nancy. Write an expression in simplest form that represents the sum of their pre-algebra test scores. Let n be Nancy's test score.
 12. _____

13. **FLOWER GARDENS** The figures at the right show sketches of Earl's and Dylan's flower gardens. If the perimeter of each of their gardens is the same, what is the length and width of Earl's garden?



13. _____

For Exercises 14 and 15, solve each inequality. Graph the solution set on a number line.

14. $-7y - 8 \geq 5y + 16$
 14. _____


15. $3(n - 2) > 2(n + 4)$
 15. _____


Test, Form 2A

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

1. What is $4\frac{3}{16}$ written as a decimal?
 A. 4.1875 B. 4.316 C. 4.3 D. $4.\bar{3}$ 1. _____

2. What is $-0.\bar{5}$ written as a fraction in simplest form?
 F. $-\frac{55}{100}$ G. $-\frac{1}{2}$ H. $-\frac{5}{9}$ I. $-\frac{11}{12}$ 2. _____

What is the value of each expression in simplest form?

3. $\frac{5}{8} + \frac{1}{6}$
 A. $\frac{5}{48}$ B. $\frac{3}{7}$ C. $\frac{6}{14}$ D. $\frac{19}{24}$ 3. _____

4. $-2\frac{4}{9} - 1\frac{1}{3}$
 F. $-1\frac{5}{6}$ G. $-1\frac{1}{9}$ H. $-3\frac{5}{12}$ I. $-3\frac{7}{9}$ 4. _____

5. **HEIGHT** Marni is $48\frac{3}{8}$ inches tall and Suzanna is $47\frac{5}{8}$ inches.
 How much taller is Marni than Suzanna?
 A. $\frac{3}{4}$ in. B. $1\frac{1}{4}$ in. C. $1\frac{3}{4}$ in. D. $\frac{1}{4}$ in. 5. _____

What is the value of each expression in simplest form?

6. $-\frac{5}{12} \cdot \frac{8}{15}$
 F. $-\frac{1}{9}$ G. $-\frac{2}{9}$ H. $-\frac{2}{3}$ I. $\frac{1}{4}$ 6. _____

7. $-3\frac{3}{4} \div 2\frac{1}{12}$
 A. $-1\frac{2}{3}$ B. $-\frac{5}{9}$ C. $-1\frac{4}{5}$ D. $-5\frac{3}{4}$ 7. _____

8. What is $\frac{11}{20}$ written as a percent?
 F. 11% G. 22% H. 44% I. 55% 8. _____

9. What is 84% written as a fraction in simplest form?
 A. $\frac{21}{50}$ B. $\frac{12}{25}$ C. $\frac{21}{25}$ D. $\frac{42}{50}$ 9. _____

Test, Form 2A (continued)

10. What is 8.5% written as a decimal?
 F. 0.85 G. 8.5 H. 0.085 I. 85.0 10. _____
11. What is 0.052 written as a percent?
 A. 52% B. 0.52% C. 0.052% D. 5.2% 11. _____
12. Of the 75 hotel guests who attended breakfast, 40% ordered eggs. To find the number of people who ordered eggs, which percent proportion would you use?
 F. $\frac{a}{75} = \frac{100}{40}$ G. $\frac{a}{75} = \frac{40}{100}$ H. $\frac{a}{75} = \frac{60}{100}$ I. $\frac{75}{b} = \frac{40}{100}$ 12. _____
13. **EXTRACURRICULAR ACTIVITIES** There are 250 students at Westlake Middle School and 50 of them are in the school chorus. What is the percent of students who are in the chorus?
 A. 17% B. 83% C. 6% D. 20% 13. _____

For Exercises 14 and 15, solve each problem using the percent equation.

14. What is 15% of 250.2?
 F. 38 G. 37.5 H. 375.3 I. 37.53 14. _____
15. 16 is 12.5% percent of what number?
 A. 128 B. 200 C. 8 D. 96 15. _____
16. **SALES TAX** Marisol wants to buy a CD for \$16. If there is 7% sales tax, what is the amount of the sales tax on the CD? 16. _____
17. **TEMPERATURE** What is the percent of change in temperature if the temperature was 80°F at 1:00 P.M. and 84°F at 3:00 P.M.? 17. _____
18. **SHOPPING** How much is the sale price of a \$195.65 table lamp that is on sale for 18% off? Round to the nearest cent. 18. _____
19. What is the simple interest to the nearest cent on \$375 at 6.75% for $1\frac{1}{4}$ years? 19. _____
20. How much is in a savings account that started with \$500 and earned 7.5% compound interest for 2 years? 20. _____

Test, Form 2A

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

1. What is the value of the expression $(-4)^3$?

- A. -64 B. -12 C. 12 D. 64 1. _____

2. Using exponents, what is the simplified form of $\frac{12x^5}{6x^2}$?

- F. 2^3 G. 6^3 H. $6x^3$ I. $2x^3$ 2. _____

3. Using exponents, what is the simplified form of $(-x^4y^2)^2$?

- A. $-x^8y^4$ B. x^8y^4 C. $-x^6y^4$ D. x^6y^4 3. _____

4. METRIC One millimeter is 0.001 of a meter. What is this decimal as a power of 10?

- F. 10^3 G. $\frac{1}{10^3}$ H. 10^{-3} I. $\frac{1}{1,000}$ 4. _____

5. LANDMARKS The Statue of Liberty weighs 450,000 pounds. What is this number in scientific notation?

- A. 4.5×10^{-5}
 B. 4.5×10^{-4}
 C. 4.5×10^4
 D. 4.5×10^5 5. _____

6. What is the square root of $-\sqrt{\frac{144}{100}}$?

- F. -120 G. $-\frac{36}{25}$ H. $-\frac{6}{5}$ I. $\frac{6}{5}$ 6. _____

7. To the nearest whole number, what is the best estimate of $\sqrt{214}$?

- A. 9 B. 15 C. 36 D. 41.5 7. _____

8. What is the solution of the equation $s^2 = 576$?

- F. -24 or 24 H. -24
 G. -288 or 288 I. 24 8. _____

Test, Form 2A (continued)

9. **SANDBOX** The area of a square sandbox is 83 square feet. To the nearest foot, what is the perimeter of the sandbox?
 A. 9 ft B. 9.1 ft C. 36 ft D. 41.5 ft 9. _____
10. **SECRETS** Before school starts you tell three friends a secret. In the morning each of these friends tells three of their friends your secret. In the afternoon the students who learned your secret in the morning each told three of their friends. How many students learned your secret in the afternoon? 10. _____
11. **FUNDRAISER** The band is selling 50 hats for a fundraiser. Each hat is being sold for \$12. The hats cost a total of \$400. If they sell all of the hats, how much money will be raised by the band? Use the *act it out* strategy. 11. _____
12. **SPEED** The speed of light is approximately 3×10^8 meters per second, while the speed of sound is approximately 3.4×10^2 meters per second. How many times faster is the speed of light than the speed of sound? Round your answer to the nearest ten-thousand. Write your answer in scientific notation. 12. _____
13. **FLOORING** Tito is installing a new kitchen floor. The kitchen is square in shape and has an area of 441 square feet. What is the length of one side of Tito's kitchen? 13. _____
14. **NUMBERS** Name one whole number, one integer, one rational number, and one irrational number. Do not use the same number twice. 14. _____
 Whole: _____
 Integer: _____
 Rational: _____
 Irrational: _____
15. Find $\sqrt[3]{216}$. 15. _____
16. Estimate $\sqrt[3]{130}$ to the nearest whole number. 16. _____

Test, Form 2A

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

Which equation represents each sentence?

1. 12 birds is 3 more birds than Rhonda saw yesterday.
 A. $12 = 3b$ B. $12 = 3 - b$ C. $12 = b + 3$ D. $12 = \frac{b}{3}$ 1. _____

2. -92 is the product of -4 and a number.
 F. $-92 = -4 + n$ H. $-92 = \frac{n}{4}$
 G. $-92 = -4n$ I. $-92 = -4 - n$ 2. _____

What is the solution of each equation?

3. $r - 15 = -7$
 A. 22 B. 8 C. -8 D. -22 3. _____

4. $-25 = n + 10$
 F. 35 G. 15 H. -15 I. -35 4. _____

5. $-3c = -45$
 A. -48 B. -42 C. -15 D. 15 5. _____

6. $-54 = 2m$
 F. -56 G. -27 H. 27 I. 52 6. _____

7. $4 - 5y = -16$
 A. -5 B. 4 C. 5 D. 100 7. _____

8. $7c - 4 = 17$
 F. $\frac{7}{13}$ G. $\frac{13}{7}$ H. 3 I. 14 8. _____

9. Which inequality represents no less than 8 hours of sleep?
 A. $s \geq 8$ B. $s \leq 8$ C. $s > 8$ D. $s < 8$ 9. _____

What is the solution of each inequality?

10. $x - 12 \geq 5$
 F. $x \leq -7$ G. $x \geq -7$ H. $x \geq 17$ I. $x \leq 17$ 10. _____

11. $\frac{c}{6} \leq -12$
 A. $c \leq -2$ B. $c \geq -2$ C. $c \leq -72$ D. $c \geq -72$ 11. _____

12. $-4x + 5 < 29$
 F. $x < -6$ G. $x > -6$ H. $x < 6$ I. $x > 6$ 12. _____

Test, Form 2A (continued)

13. **INTERNET** An Internet company advertises Internet service for \$0.03 per minute plus a monthly fee of \$29.95. If your bill for one month was \$38.95, What is the number of minutes used?

- A. 300 min B. 100 min C. 30 min D. 3 min

13. _____

14. Seven less than a number is at most -11. Which inequality can be used to find the number?

- F. $n \geq -18$ G. $n \leq -18$ H. $n \geq -4$ I. $n \leq -4$

14. _____

15. **MONEY** Phillip received money from his grandfather for his birthday. He put half in the bank and bought two \$15 CDs. Later that day, Phillip's sister gave him \$5 that she owed him. At the end of the day he had \$25. How much money did his grandfather give him for his birthday?

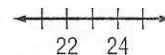
- A. \$50 B. \$75 C. \$90 D. \$100

15. _____

Solve each inequality. Graph the solution set on a number line.

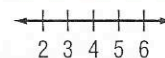
16. $15 < t - 7$

16. _____



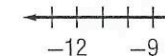
17. $\frac{p}{-4} - 2 \leq -3$

17. _____



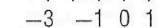
18. $-23 > 7 + 3w$

18. _____



19. Graph the solution set of $n < -1$ or $n \geq 0$.


19. _____




20. **MOVIES** Tickets to the movies are discounted for children 8 years old and under and for adults older than 65. Write a compound inequality that shows the ages that qualify for a discounted ticket.

20. _____

Pretest Ch. 4

1. C
2. I
3. C
4. F
5. D
6. H
7. A
8. G
9. B
10. H
11. A
12. $13n + 9$
13. $L = 12\text{ft}$
 $w = 8\text{ft}$
14. $y \leq -2$


A number line with tick marks at -3, -2, and -1. A solid dot is placed at -2, and an arrow points to the left from this dot, indicating the solution set $y \leq -2$.
15. $n > 14$


A number line with tick marks at 13, 14, and 15. An open circle is placed at 14, and an arrow points to the right from this circle, indicating the solution set $n > 14$.

Rational Numbers and Percent

1. A
2. H
3. D
4. I
5. A
6. G
7. C
8. I
9. C
10. H
11. D
12. G
13. D
14. I
15. A
16. 51.12
17. 5%
18. $\$160.43$
19. $\$31.64$
20. $\$577.81$

Real Numbers and Monomials

Equations and Inequalities

1. A 15.6

2. I 16.5

3. B.

4. H

5. D

6. H

7. B

8. F

9. C

10. 27 students

11. \$200

12. 8.8×10^5

13. 21 ft.

14. vary

5

-9

$\frac{2}{3}$

$\sqrt{5}$

1. C

2. G

3. B

4. I

5. D

6. G

7. B

8. H

9. A

10. H

11. C

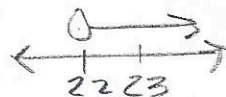
12. G

13. A

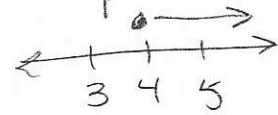
14. I

15. D

16. $t > 22$



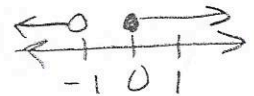
17. $p \geq 4$



18. $w < -10$



19.



20. $a \leq 8$ OR $a > 65$