

Math 015:Pre-Algebra, FINAL REVIEW
 Instructor: Theresa Pham

Name: _____

1. Write in expanded form 7,982

a. $70,000 + 900 + 80 + 2$

b. $7,000 + 900 + 80 + 2$

c. $7,000 + 9000 + 80 + 2$

d. $7,000 + 900 + 80 + 20$

2. Round 689,652 to the nearest thousands

a. 69,000

b. 700,000

c. 689,000

d. 690,000

3. Find the sum of 356, 481, 294, and 117.

a. 1,248

b. 1,238

c. 1,148

d. 1,338

4. Multiply: 4,628

x 226

a. 1,045,928

b. 1,054,848

c. 1,405,888

d. 1,045,828

5. Evaluate: $12xy$, when $x = 8$ and $y = 11$.

a. 31

b. 228

c. 1056

d. 188

6. Write in exponential form. $a \cdot a \cdot a \cdot a \cdot b \cdot b \cdot c \cdot c \cdot c \cdot c$

a. $a^3 \cdot b^2 \cdot c^4$

b. $a^4 \cdot b^2 \cdot c^4$

c. $a^4 \cdot b^3 \cdot c^4$

d. $a^3 \cdot b^3 \cdot c^4$

7. Evaluate: $3^3 \cdot 5^2$

a. 90

b. 270

c. 225

d. 675

8. What is the quotient of 19,254 and 6?

a. 3,009

b. 3,209

- c. 1,809
9. Find all the factors of 48.
- a. 1, 2, 3, 4, 12, 16, 24, 48
- b. 1, 2, 3, 4, 6, 8, 11, 12, 16, 24
- c. 2, 3, 6, 8, 24
- d. 1, 2, 3, 4, 6, 8, 12, 16, 24, 48
10. Prime factor 240.
- a. $2^4 \cdot 3 \cdot 5$
- b. $2^3 \cdot 3^2 \cdot 5$
- c. $2^3 \cdot 3 \cdot 5^2$
- d. $2^4 \cdot 3^2 \cdot 5$
11. Evaluate: x^4y^2 when $x = 2$ and $y = 11$.
- a. 176
- b. 352
- c. 1936
- d. 968
12. Solve: $28 = y - 4$.
- a. $y = 24$
- b. $y = -32$
- c. $y = -4$
- d. $y = 32$
13. Solve: $6y = 54$.
- a. $y = 9$
- b. $y = 60$
- b. $y = 48$
- d. $y = 8$
14. Evaluate: $4a + (a - b)^3$, when $a = 5$ and $b = 2$.
- a. 29
- b. 18
- c. 47
- d. 30
15. A construction company is considering purchasing a 25-acre tract of land on which to build single-family homes. If the price is \$3,690 per acre, what is the total cost of the land?
- a. \$92,250
- b. \$1,476
- c. \$95,940
- d. \$88,560
16. What is the correct inequality statement.
- a. $-62 \geq 26$
- b. $-62 < 26$

c. $12 < -24$

d. $-42 < -56$

17. Evaluate: $-|-82|$.

a. 82

b. $\frac{1}{82}$

c. $\frac{-1}{82}$

d. -82

18. Find the sum of -24, 16, and -32.

a. -40

b. -72

c. -24

d. 72

19. Subtract $-28 - (-17)$.

a. -45

b. 11

c. -11

d. 45

20. Find the difference between -27 and -32.

a. -59

b. -5

c. 59

d. 5

21. What is 5 less than -21.

a. 26

b. -26

c. -16

d. 16

22. What is the product of -14 and -7?

a. 98

b. 2

c. -21

d. -89

23. Evaluate: $-c \div d$, when $c = -32$ and $d = -8$.

a. 4

b. $\frac{1}{4}$

c. 4.4

d. -4

24. Solve: $12 + p = 3$.

a. $p = 15$

b. $p = -9$

c. $p = \frac{1}{4}$

d. $p = -15$

25. Solve: $4x = -32$

a. $x = 8$

b. $x = -36$

c. $x = -8$

d. $x = -28$

26. Simplify: $(1 - 5)^2 \div (-6 + 4) + 8(-3)$.

a. -16

b. -32

b. -22

d. -6

27. Find the Least Common Multiple of 24 and 32

a. 8

b. 68

c. 768

d. 96

28. Find the Greatest Common Factor of 32, 72, and 120.

a. 8

b. 2

c. 16

d. 4

29. Find the correct denominator to make equivalent fractions of $\frac{7}{12} = \frac{21}{?}$.

a. 15

b. 36

c. 26

d. none of these

30. Choose the correct symbol $<$, $>$, or $=$ for $\frac{7}{15} ? \frac{24}{45}$

a. $>$

b. $=$

c. $<$

31. Subtract: $12 - 5\frac{3}{5}$

a. $7\frac{3}{5}$

b. $-17\frac{3}{5}$

c. $6\frac{3}{5}$

d. $6\frac{2}{5}$

32. Subtract: $12\frac{2}{7} - 6\frac{11}{14}$

a. $6\frac{9}{7}$

b. $5\frac{13}{21}$

c. $6\frac{1}{2}$

d. $5\frac{1}{2}$

33. Multiply: $\frac{5}{8} \cdot \left(-\frac{32}{75}\right)$

a. $-\frac{1}{5}$

b. $-\frac{4}{15}$

c. $-\frac{27}{67}$

d. $-\frac{4}{25}$

34. Divide: $-3\frac{3}{5} \div 5\frac{5}{11}$

a. $-15\frac{3}{11}$

b. $-15\frac{33}{25}$

c. $-\frac{77}{90}$

d. $-\frac{33}{50}$

35. Solve: $x - \frac{9}{14} = \frac{5}{6}$

a. $\frac{7}{11}$

b. $1\frac{10}{21}$

c. $-\frac{5}{8}$

d. $1\frac{5}{11}$

36. Solve: $-\frac{7}{12}x = -\frac{35}{48}$

a. $1\frac{1}{4}$

b. $-\frac{21}{25}$

c. $-\frac{7}{9}$

d. $1\frac{3}{4}$

37. Evaluate: $\left(\frac{2}{3}\right)^3\left(\frac{3}{8}\right)^2$

a. $\frac{1}{4}$

c. 4

b. 3

d. $\frac{1}{24}$

38. Which is a true statement?

a. $4.005 < 4.00005$

c. $2.008 < 2.009$

b. $3.005 > 3.0055$

d. $5.55 > 5.555$

39. Add: $45.034 + (-12.12) + 9.005$

a. 66.159

c. 23.909

b. 41.919

d. 48.149

40. Divide: $58.88 \div (-4.6)$

a. -12.8

c. 12.8

b. 21.28

d. -12.78

41. Multiply: $(3.42)(-4.6)(-2.16)$

a. 33.98112

c. 3.34

b. -3.34

d. -33.98112

42. Bill bought a car for \$24,985.76. He paid a down payment of \$2000. The balance is to be paid off in 48 equal payments. Which will be the amount of each payment?

a. \$562.20

c. \$368.66

b. \$504.56

d. \$478.87

43. Evaluate: $\sqrt{121}$

a. $4\sqrt{31}$

c. $11\sqrt{2}$

b. 11

d. $\sqrt{11}$

44. Simplify: $-2a + 7b - 13b - 8a + b$

a. $-10a + 5b$

b. $-10a - 5b$

c. $10a - 21b$

d. $-10a - 21b$

45. Simplify: $-\frac{2}{5}x + \frac{1}{4} - \frac{3}{10}x + \frac{3}{8}$

a. $-\frac{7}{10}x + \frac{5}{8}$

b. $-\frac{1}{3}x + \frac{1}{3}$

c. $-\frac{1}{10}x + \frac{3}{8}$

d. $\frac{1}{10}x + \frac{1}{3}$

46. Simplify: $(4a^2 - 7a + 12) + (-2a^2 - 3a - 4)$

a. $2a^4 - 10a^2 + 8$

b. $2a^2 - 10a + 8$

c. $6a^2 - 4a + 16$

d. $-2a^2 - 10a + 8$

47. Simplify: $(3b^2 - 5b - 8) - (7b^2 - 2b + 3)$

a. $10b^2 - 7b - 5$

b. $4b^2 - 7b - 11$

c. $-4b^2 - 7b - 5$

d. $-4b^2 - 3b - 11$

48. Simplify: $-3a^4b^2 - 2a^2b^3$

a. $-6a^6b^5$

b. $-6a^8b^6$

c. $6a^6b^5$

d. $-a^6b^6$

49. Simplify: $\left(\frac{a^5b^2c}{a^3b^7c^2}\right)$

a. $a^8b^9c^3$

b. $\frac{a^8b^9}{c^3}$

c. $\frac{a^2}{b^5c}$

d. $\frac{a^8c}{b^9}$

50. Simplify: $3ab^3$ ²

a. $6a^2b^6$

b. $9a^3b^5$

c. $9a^3b^6$

d. $9a^2b^6$

51. Simplify: $3x(5x^2 - 2x - 3)$

a. $15x^2 - 6x - 9$

b. $15x^3 - 6x^2 - 9x$

c. $8x^3 - x^2 - x$

d. $75x^3 - 6x - 9$

52. Simplify: $(3x + 2)(x - 5)$

a. $3x^2 - 13x - 10$

b. $4x^2 - 17x + 10$

c. $3x^2 - 17x - 10$

d. $4x - 3$

53. Solve: $-3x + 12 = 18$

a. $x = -10$

b. $x = -2$

c. $x = 2$

d. $x = 10$

54. Solve: $17 - 8(x - 3) = 1$

a. $x = \frac{-7}{8}$

b. $x = \frac{-3}{4}$

c. $x = 5$

d. $x = -1$

55. Translate and solve: The difference between a number and 6 is negative eight.

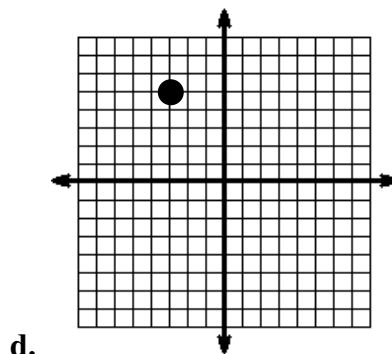
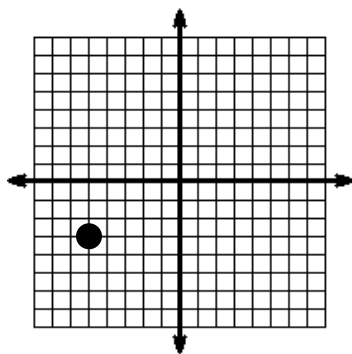
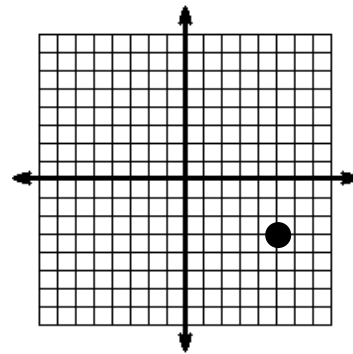
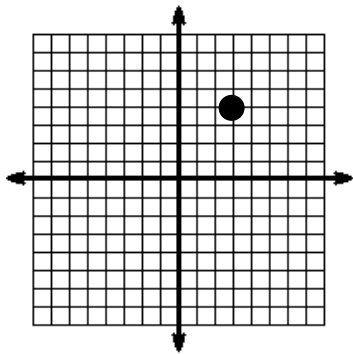
a. $-6n = -8; n = \frac{4}{3}$

b. $6 - n = 8; n = 2$

c. $n - 6 = 8; n = 14$

d. $n - 6 = -8; n = -2$

56. Graph the coordinate $(-3, 5)$



57. Find the ratio of 12 females to 28 males.

a. $\frac{7}{4}$

b. $\frac{4}{7}$

c. $\frac{3}{7}$

d. $\frac{3}{4}$

58. Express as a unit rate, \$168 for 12 hours of work.

a. \$12 per hour

b. \$16 per hour

c. \$10.5 per hour

d. \$14 per hour

59. A recipe calls 4 tsp of salt to make 15 cookies. How much salt would be needed to make 45 cookies?

a. 8 tsp

b. 10 tsp

c. 12 tsp

d. 6 tsp

60. Simplify: $5(3x - 4)$

a. $15x - 4$

c. $-5x$

b. $15x - 20$

d. $8x + 1$

61. Simplify: $-3(2x - 5y + 7)$

a. $-6x - 15y - 21$

c. $-6x - 15y + 21$

b. $6x + 15y - 21$

d. $-6x + 15y - 21$

62. Simplify: $\sqrt{90}$

a. $9\sqrt{3}$

c. $3\sqrt{10}$

b. 45

d. $9\sqrt{5}$

63. Write 125% as a fraction.

a. $\frac{1}{25}$

c. $1\frac{3}{8}$

b. $1\frac{1}{4}$

d. $\frac{3}{4}$

64. Write $16\frac{2}{3}\%$ as a fraction.

a. $\frac{1}{6}$

c. $\frac{19}{6}$

b. $\frac{50}{3}$

d. $\frac{3}{8}$

65. Write $\frac{5}{16}$ as a percent.

a. 33.3%

c. 32%

b. 35%

d. 31.25%

66. Solve: 72 is 25% of what number?

a. 2.88

c. 288

b. 28.8

d. none of these

67. Solve: What is 46% of 60?
- a. 27.6
b. 130.4
c. 2.76
d. 13.04
68. Solve: What is 120% of 36?
- a. 30
b. 3.33
c. 43.2
d. 33
69. Solve: What percent of 90 is 18?
- a. 200%
b. 5%
c. 0.5%
d. 20%
70. Solve: What percent of 30 is 60?
- a. 50%
b. 200%
c. 2%
d. 500%
71. 5% of the employees at the Lido Insurance Company called in sick with the flu. If 10 employees called in sick, how many employees are there at the company?
- a. 20
b. 50
c. 200
d. 500
72. On the Almen High School basketball team, 9 out of the 22 players are over 6 feet tall. What percent of the players are over 6 feet tall?
- a. 52%
b. 48.6%
c. 40.91%
d. 49.42%
73. Simplify: $\left(\frac{3}{4}\right)^2 + \frac{1}{9} \div \frac{1}{3}$
- a. $\frac{21}{25}$
b. $\frac{1}{48}$
c. $\frac{43}{48}$
d. $1\frac{3}{48}$

SOLUTIONS

- | | | | |
|-------|-------|-------|-------|
| 1. b | 25. c | 49. c | 50. d |
| 2. d | 26. b | 51. b | 52. a |
| 3. a | 27. d | 53. b | 54. c |
| 4. a | 28. a | 55. d | |
| 5. c | 29. b | 56. d | |
| 6. b | 30. c | 57. c | |
| 7. d | 31. d | 58. d | |
| 8. b | 32. d | 59. c | |
| 9. d | 33. b | 60. b | |
| 10. a | 34. d | 61. d | |
| 11. c | 35. b | 62. c | |
| 12. d | 36. a | 63. b | |
| 13. a | 37. d | 64. a | |
| 14. c | 38. c | 65. d | |
| 15. a | 39. b | 66. c | |
| 16. b | 40. a | 66. a | |
| 17. d | 41. a | 68. c | |
| 18. a | 42. d | 69. d | |
| 19. c | 43. b | 70. b | |
| 20. d | 44. b | 71. c | |
| 21. b | 45. a | 72. c | |
| 22. a | 46. b | 73. c | |
| 23. d | 47. d | | |
| 24. b | 48. a | | |