

MATH 50 EXAM REVIEW

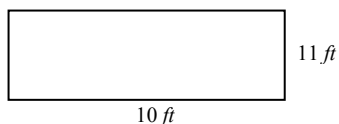
Perform the indicated operations. Write answers to problems with fractions in lowest terms.

1. $-23 + -52$ 2. $17 - -8$ 3. $-13 - 26$ 4. $\frac{15}{32} \div 3\frac{1}{5}$
5. $23\frac{4}{5} - 5\frac{2}{3}$ 6. $\frac{1}{4} + \frac{3}{8} + \frac{15}{16}$ 7. $0.0678 - 0.782 - 0.5601 + 0.34$
8. $(1.5)(0.024)$ 9. $7.426 \div 0.8$

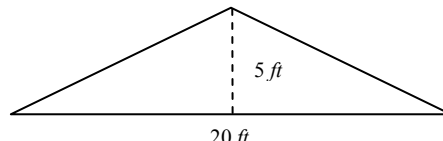
Use the order of operations to work each problem.

10. $24 - 2^3(5)$ 11. $9 + 4(3 - 7)$ 12. $2(-3)^2 - 7(-1)^4$

For the figure below, find each of the following, indicate the appropriate units.



13. Find the perimeter.



14. Find the area.

Use the properties of exponents to write the following as a single exponential expression.

Do not evaluate.

15. $(9^3)^4$ 16. $5^6 \cdot 5 \cdot 5^3$

Perform the indicated operations.

17. $(x^2 - 3x + 7) - (2x^2 + 4x + 9)$ 18. $-2.91x - (-0.3x) + 3.55x$ 19. $(2x + 1)(x - 3)$

Evaluate the following for the given values of the variables.

20. $3x - y + 2z$ if $x = 5$, $y = -2$, and $z = -3$ 21. $\frac{b + c}{2a}$ if $a = -1$, $b = 8$, and $c = -10$

22. $x^2 + y$ if $x = \frac{1}{3}$ and $y = \frac{3}{4}$. Write answers as fractions in lowest terms.

23. $ab - c^2$ if $a = 3.2$, $b = 5.6$, and $c = 2.5$

Solve the following equations.

24. $16x + 12 = 15$ 25. $5y - 12 = 7y - 12$ 26. $\frac{5}{16}x - \frac{1}{2} = 2$

Solve each proportion and round to the nearest tenth when necessary.

27. $\frac{15}{x} = \frac{0.74}{3.7}$

28. $\frac{21}{36} = \frac{x}{170}$

29. During the three years that Donna played basketball in high school, her team won 22 games the first year, 20 games the second year, and 18 games the third year. What was the average number of games won each year?

30. A railroad car contains $120\frac{1}{2}$ tons of baled hay. A truck that is being used to unload the hay can load $6\frac{3}{4}$ tons. How many truckloads of hay are in the railroad car?

31. During a canned vegetable sale, Ted bought 21 cans of assorted vegetables. If the sale price was 3 cans for \$2.12, how much did Ted pay for the canned vegetables?

32. A farmer wants to put a fence around a rectangular field that is 203 feet by 93 feet. If the fence costs \$16 per foot, how much will the fence cost?

33. A map of Australia is scaled so that 1.5 inches represent 100 miles. How many miles are represented by 4 inches on the map? Round to the nearest mile.

34. Hazel spends 23 % of her monthly income for rent. If her monthly rent is \$850, what is her monthly income? Round to the nearest cent.

35. Write the percent as a fraction and a decimal.
78%

36. Write the fraction as a decimal and a percent.

$$\frac{1}{5}$$

Solve each percent problem. Round to the nearest tenth or tenth of a percent when necessary.

37. 72 is 18% of what number?

38. What percent of 63.8 is 37.8?

39. Is the ordered pair a solution of the equation?

$$7x - 2y = 14 \quad (3, 7)$$

40. For the equation, complete the given ordered pairs and use the results to graph the line.

$$3x - 2y = 12 \quad (-4, \quad) \quad (\quad , 0) \quad (-2, \quad)$$

Answers

1. -75 2. 25 3. -39 4. $\frac{75}{512}$ 5. $18\frac{2}{15}$
6. $\frac{25}{16}$ 7. -0.9343 8. 0.036 9. 9.2825 10. -16
11. -7 12. 11 13. 42 ft 14. 50 ft^2 15. 9^{12}
16. 5^{10} 17. $-x^2 - 7x - 2$ 18. $0.94x$ 19. $2x^2 - 5x - 3$ 20. 11
21. 1 22. $\frac{31}{36}$ 23. 11.67 24. $x = \frac{3}{16}$ 25. $y = 0$
26. $x = 8$ 27. $x = 75$ 28. $x = 99.2$ 29. 20 games 30. $17\frac{23}{27} \approx 18\text{ truckloads}$
31. $\$14.84$ 32. $\$9472$ 33. 267 miles 34. $\$3695.65$ 35. $\frac{39}{50} = 0.78$
36. $0.2 = 20\%$ 37. 400 38. 59.2% 39. No 40. $(-4, -12)$ $(4, 0)$ $(-2, -9)$

