

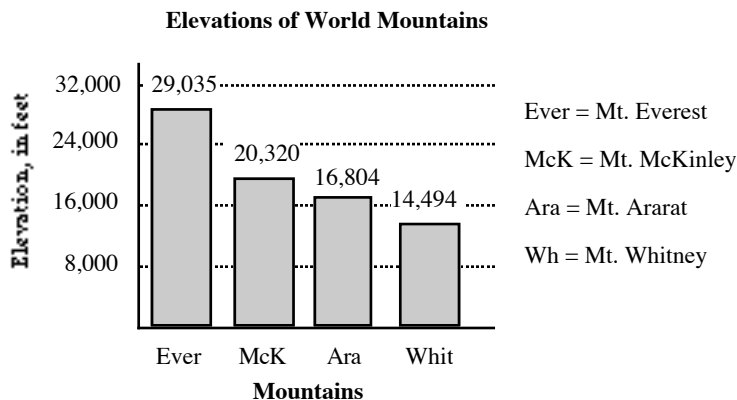
Final Exam Pre-Test

Round each number to the indicated place.

1. 3,052 nearest hundred 2. 29,602,815 nearest million

Based on the bar graph, at right, answer each question with a sentence.

3. How much higher is Mt. Everest (Nepal) than Mt. Ararat (Turkey)?
4. How much higher is Mt. McKinley (Alaska) than Mt. Whitney (California)?



Answer as indicated.

5. Divide $2,465 \div 17$
6. Expand 8^3 and find its value.
7. Of the numbers 9, 0, 45, 23, 1, and 29, determine which are prime, which are composite, and which are neither.
8. Find the prime factorization of 420. Write the answer two ways: with and without exponents.

Evaluate each expression.

9. $-8 + (-6)$ 10. $-2 + 15$ 11. $-9 - 4$
12. $5 - 12$ 13. $17 - (-8)$ 14. $-2 - (-8)$
15. $(-9) \cdot (-1)$ 16. $8 \cdot (-7)$ 17. $-3 \cdot (-2) \cdot (-5) \cdot 4$
18. $\frac{-40}{-8}$ 19. $\frac{36}{-12}$ 20. $18 - 7 + (-14) - (-6)$

21. Evaluate $x^2 + y$ by replacing x with 3 and y with -10.

Evaluate each expression using the order of operations. Show all steps.

22. $6 - \sqrt{64}$

23. $9^2 - 10^2$

24. $|-7 - (-8)|$

Evaluate the numerical value of each formula with the given replacement values.

25. $m = \frac{y-k}{x-h}$

$y = 12$

$k = 6$

$x = 3$

$h = 5$

26. $m = \frac{y-k}{x-h}$

$y = 8$

$k = -4$

$x = -2$

$h = 1$

Simplify by combining like terms, if possible.

27. $-5y^3 - 7y^3$

28. $6x - 4x - (-x)$

29. $w^3 - 3w - 2w^3 + 6w$

Find the product.

Rewrite each expression using the Distributive Property.

30. $-4(-2x^2)$

31. $2(-8y)$

32. $6(3w - 5)$

33. $-3(-5q + 7)$

Solve. Be sure to check each answer.

34. $6y + 4 = 2y - 12$

35. $3w + 5 - 4w = 7 - 3w - 8$

For each problem, set up the legend, draw a diagram, identify the formula, and write and solve the equation. Be sure to write the answer as a sentence.

36. Two friends, Becca and Andrea, won a lottery worth \$26,500. From their prearranged agreement, Andrea is to receive \$3,500 more than Becca receives. How much of the money will each receive?

37. Find the greatest common factor of 54 and 96.

38. Simplify $\frac{90p}{36p^2}$ completely.

Multiply and simplify.

Divide and simplify.

39. $\frac{4}{3} \cdot \frac{2x}{8}$

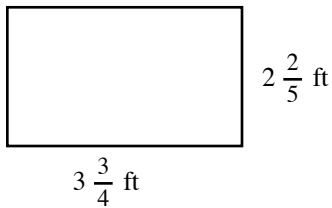
40. $-\frac{3a}{8} \cdot \left(-\frac{6b}{25ac}\right) \cdot (-5c)$

41. $\frac{10w}{21} \div \frac{5}{3}$

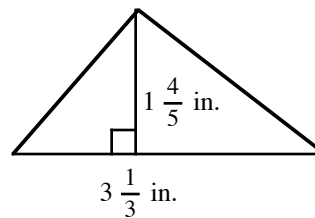
42. $-\frac{7x}{10xy} \div \frac{49}{5y^2}$

Find the area of each geometric figure.

43.



44.



Simplify.

45. $\frac{17}{25} p^2 + \frac{18}{25} p^2$

46. $\frac{19}{15} c - \frac{7}{15} c$

47. $-\frac{2}{15} xy - \left(-\frac{8}{15} xy\right)$

48. $\frac{1}{6} + \frac{2}{15}$

49. $\frac{11}{12} - \frac{3}{4}$

50. $\frac{1}{6} - \left(-\frac{3}{8}\right)$

51. Last weekend, Marco worked $7\frac{11}{12}$ hours on Saturday and $6\frac{3}{4}$ hours on Sunday. How many hours did Marco work that weekend?

Solve.

52. $-32 = 40v$

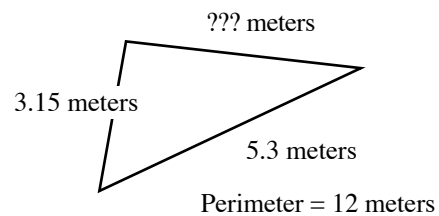
53. $\frac{3}{10} x = 6$

Answer as indicated.

54. Round \$10.59602 to the nearest penny.

55. Round \$532.19 to the nearest dollar.

56. Find the perimeter of this geometric figure. 57. Find the length of the third side.



Evaluate.

58. 0.2×0.36

59. 0.308×100

60. $4.92 \div 8$

61. $2.678 \div 0.13$

Answer as indicated.

62. Find the decimal equivalent of $\frac{7}{8}$.

63. Petre owns his own cab. Yesterday, in 9.5 hours of driving, he earned \$165.30. Write his earnings as a unit rate per hour.

64. Write the ratio 2.7 grams : 0.45 grams in fractional form, and simplify it completely.

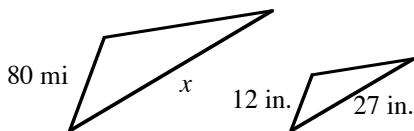
65. Simplify $\frac{2.85 \text{ calories}}{1.5 \text{ grams}}$ to a unit rate, and write the unit rate in words.

66. Tomás traveled 195 miles in 4 hours. Write his speed as a unit rate per hour.

67. A 24 ounce cup of Twinklebuck's coffee costs \$2.28, and a 20 ounce cup of Sunbuck's coffee costs \$1.80. Which has the better value?

68. Given the two similar triangles, solve for x .

69. Solve for x in $\frac{24}{9} = \frac{32}{x}$.



70. Write 3.2% as a decimal.

71. Write 0.4 as a percent.

Solve each problem. Write a sentence answering the question.

72. At the Fireman's Pancake Breakfast, Zia can cook 18 pancakes in 4 minutes. How long will it take Zia to cook 90 pancakes?

73. Jolanda has a coupon for a 20% discount at Sidewalk's Shoes. She found a pair of shoes that cost \$55.00. What will the new price be?

74. Courtney is buying a computer printer that costs \$117.00. The sales tax rate in his area is 8.5%. How much will she pay at the cash register?

75. Calvin sells motor homes and receives a 2.5% commission on every motor home he sells. One day, he sold one for \$96,000. How much commission did Calvin earn on the sale of that motor home?