

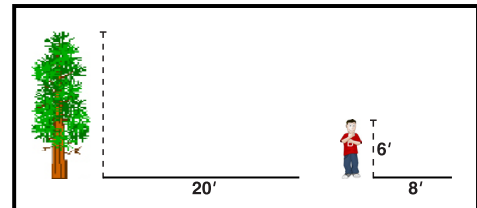
# • Math Literacy Test •

Partial credit will be given, so *show all your work*, neatly (use extra sheets if necessary). Each numbered question is worth 2 points.

DATE \_\_\_\_\_

NAME \_\_\_\_\_

- 1) How much is half of  $5\frac{3}{4}$ ? \_\_\_\_\_
- 2) Half of what number is  $1\frac{5}{8}$ ? \_\_\_\_\_
- 3) Half of the marbles in a box are red, a third are white, and the other 6 are blue.
  - a) How many marbles are there? \_\_\_\_\_
  - b) Find the *probability* of picking a marble that is *not* blue. \_\_\_\_\_
- 4) 4 *times* what number equals 15? \_\_\_\_\_
- 5) 3 *divided by* what number equals 12? \_\_\_\_\_
- 6) 7% of 250 = \_\_\_\_\_
- 7)  $\frac{3}{4}\%$  of 300 = \_\_\_\_\_
- 8) Henry has three times as much money as Martha. Together they have \$48. How much money does each person have?  
  
Henry: \_\_\_\_\_ Martha: \_\_\_\_\_
- 9) Three candies cost 25 cents. How many can you buy for \$1.50? \_\_\_\_\_
- 10) A six-foot tall man casts an eight-foot shadow. How tall is a tree that casts a twenty-foot shadow?  
  
\_\_\_\_\_



11) What part of 15 is 10? \_\_\_\_\_

12)  $7\frac{1}{2}$  is what part of 10? \_\_\_\_\_

13)  $\frac{2}{3} + \frac{1}{2} =$  \_\_\_\_\_

14) 
$$\begin{array}{r} 7\frac{1}{2} \\ - 3\frac{2}{3} \\ \hline \end{array}$$

15)  $4 \times 2\frac{1}{3} =$  \_\_\_\_\_

16)  $6 \div \frac{1}{3} =$  \_\_\_\_\_

17) a)  $3 + 2.36 + 0.67 =$  \_\_\_\_\_

b)  $7.03 - 1.129 =$  \_\_\_\_\_

18)  $90.87 \times 5.06 =$  \_\_\_\_\_

19)  $60 \div 1.5 =$  \_\_\_\_\_

20) Write as a decimal:      a)  $\frac{3}{8} =$  \_\_\_\_\_      b)  $\frac{2}{11} =$  \_\_\_\_\_

21) Write as a fraction:      a)  $2.45 =$  \_\_\_\_\_      b)  $3.5\% =$  \_\_\_\_\_

22) Two-thirds of a pound of candy costs \$0.64. Find the cost of  $1\frac{1}{2}$  pounds of candy.

\_\_\_\_\_

23) The price of a tape increased from \$12 to \$15. What is the percent of increase?

\_\_\_\_\_

- 24) A student has an average of 84 on three exams. If on the next test the student scores a 92, what is the student's new test average?

\_\_\_\_\_

- 25) Arrange in order from smallest to largest.

$$\frac{7}{12}, \frac{2}{5}, \frac{9}{5}, 0, 1, -1, -1\frac{1}{2}, 0.6, 0.09, 1.2, \frac{1}{2}\%$$

\_\_\_\_\_

Simplify.

26)  $\frac{x^7 y^{-2} z^4}{x^{-3} y^2 z^3} =$  \_\_\_\_\_

27)  $\frac{(3t^2)^3}{t} =$  \_\_\_\_\_

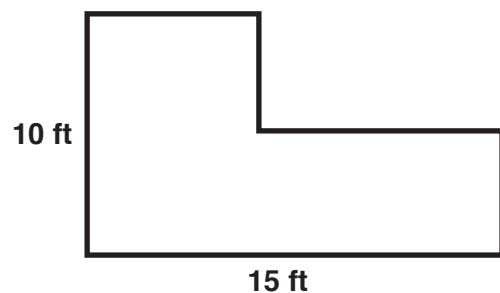
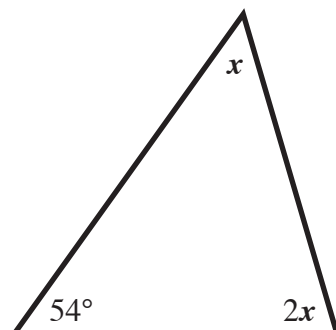
28)  $(2x - 3xy)(x - 3y) - (x - 2xy) =$  \_\_\_\_\_

Evaluate the expression when  $x = 6$  and  $y = -2$ .

29)  $2x - (3x + 2xy - 3y^2)^2$  \_\_\_\_\_

30) Solve for  $x$ .  $x =$  \_\_\_\_\_

31) Find the perimeter.



Perimeter = \_\_\_\_\_

**Factor completely.**

32)  $x^2 - 4x - 12$

\_\_\_\_\_

33)  $3ax + 8b - 6bx - 4a$

\_\_\_\_\_

34)  $x^4 - 16$

\_\_\_\_\_

**Solve for x.**

35)  $|x - 3| = 5$

\_\_\_\_\_

36)  $8x^2 - 6x = 9$

\_\_\_\_\_

37)  $x - 4 = \frac{5}{x}$

\_\_\_\_\_

38)  $2(5x - 3) = 3x^2$

\_\_\_\_\_

39) **Solve for x and y.**

$2x + 3y = 6$

$5x + 2y = 15$

\_\_\_\_\_

40) A collection of dimes and nickels has a total value of \$1.65. If there are 20 coins in all, how many of the coins are dimes?

\_\_\_\_\_

41) Find the area of the rectangle whose diagonal is 13 inches and whose width is 12 inches.

\_\_\_\_\_

42) A solution containing 30% juice is mixed with a solution containing 10% juice to make 100 gallons of a 12% juice mixture. How much of the 30% juice solution was used?

\_\_\_\_\_

43) Twelve times the square of a positive number is five more than four times the same number. Find the number.

\_\_\_\_\_

**Simplify.**

44)  $\frac{x+1}{x^2} \cdot \frac{x}{x^2-1} =$  \_\_\_\_\_

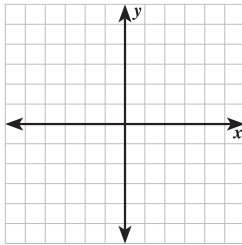
45)  $\frac{2x+4}{2} \div \frac{x}{x^2} =$  \_\_\_\_\_

46)  $\sqrt{75} + \sqrt{48} =$  \_\_\_\_\_

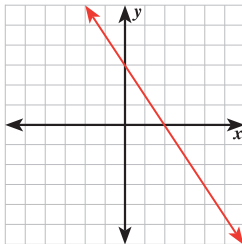
47) Write the equation of the line containing the points (6, 4) and (3, 2) in any form.

\_\_\_\_\_

48) Graph the solution set of the equation  $4x - 3y = 12$  by any method.

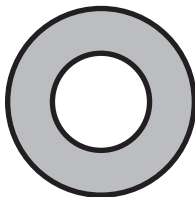


49) Write an equation in any form for the given line.



\_\_\_\_\_

50) The radius of the big circle is 6 inches long and the diameter of the small circle is 8 inches long. Find the area of the shaded region.



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