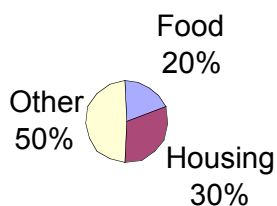


1. Evaluate (find the value of):  $18 \cdot 3^3 + 6 \div 2$
2. Evaluate:  $(12^2 - 2 \cdot 6 \div 2 + 4) \cdot 2$
3. Evaluate:  $-[3 - (-5 - 2)]^2$
4. Evaluate  $(3m + 4p)^2$  for  $m = -4$  and  $p = -2$
5. Evaluate  $(x - 1)^2 + 3xy^2 - 9$  for  $x = 3$  and  $y = -2$
6. Combine like terms:  $xy^3 - (-3xy^3)$
7. Solve for x:  $6x + 2 = x + 1$
8. Solve for y:  $-5y + \frac{1}{8} - 3y - \frac{5}{8} = \frac{1}{8}$
9. Solve for a:  $4.2a - 0.5 = 1.4a + 13.5$
10. Solve for m:  $4m - 13 = 19$
11. Solve for w:  $-w - 5(w - 2) = 12 + 2w$
12. Solve for x:  $\frac{5}{6}x = 15$
13. The sum of three consecutive odd integers is 123. What are the numbers?
14. A triangle has a perimeter of 52 inches. Find the three sides if one side is 17 inches longer than the smallest and the third side is three times the smallest.
15. Solve for y:  $8x - 7y = 3$
16. The circle graph below represents a family's monthly budget. If the total monthly income is \$2000, how much is spent on food?



17. 320 is what percent of 80?
18. Ron wants to buy a used car and needs to have a down payment of 15%. If the car Ron wants to buy costs \$5700, how much down payment will he need?
19. If the perimeter of a rectangle is 280 feet and the length is 40 feet more than the width, what are the dimensions of the rectangle?
20. Evaluate:  $-5^2 - (-6)^2 - (-4)^3 - |-7|$
21. Evaluate  $-a^4 - b^2$  when  $a = 2$  and  $b = -9$
22. Solve for m:  $\frac{1}{2} + \frac{3}{4}m = 2m + \frac{2}{3}$
23. Solve for y:  $2.7y + 4 - 5.31y = 2.593 - 0.6y$
24. Simplify:  $8(5 - x) - 30 - 2(x - 3)$
25. The formula for volume of a cone is  $V = \frac{1}{3}\pi r^2 h$ , where V is the volume of the cone, r is the radius of the cone, and h is its height. Solve the formula for h.
26. The sum of two numbers is 21. Twice the smaller plus five times the larger is 84. Find the numbers.
27. A garden has an area of  $851 \text{ ft}^2$  and a length of 37 ft. How many feet of fencing will you need to enclose the garden?
28. Multiply  $6(3y-9)$
29. Solve  $I = prt$  for  $t = ?$  when  $I = \$75.30$ ,  $r = 3\%$ ,  $p = \$502$
30. Solve for x:  $3x + 7 = 6x - 4$
31. Evaluate:  $x^2 - y^2 - z^2$  if  $x = -5$ ,  $y = 6$ , and  $z = -4$
32. Simplify  $6y - 4(y+3) + (y-4)$
33. Simplify  $10xy^5 - (-7xy^5)$
34. If a department store is selling towels for \$8.08 on sale after a 15% markdown, how much did the towels cost *before* the sale?

Also, be *sure* you work the problems from the additional handouts for this test (one over 1.1 and one over 2.3).

ANSWERS:

1. 489

2. 284

3. -100

4. 400

5. 31

6.  $4xy^3$

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

8.  $-\frac{5}{64}$

9. 5

10. 8

11.  $-\frac{1}{4}$

12. 18

13. 39, 41, and 43

14. 7 in., 24 in., and 21 in.

15.  $y = \frac{8x-3}{7}$

16. \$400

17. 400%

18. \$855

19. 50 ft by 90 ft

20. -4

21. -97

22.  $-\frac{2}{15}$

23. 0.7

24.  $-10x + 16$

25.  $h = \frac{3V}{\pi r^2}$

26. 7 and 14

27. 120 ft

28.  $18y - 54$

29.  $t = 5$

30.  $x = \frac{11}{3}$

31. -27

32.  $3y - 16$

33.  $17xy^5$

34. \$9.50 (or \$9.51)