Math 64 Practice Test #4

Appointments can be made at www.rccmathlab.com
My appointment is for: ______ at ____ : ____

DON'T FORGET TO BRING A PHOTO ID FOR THE TEST! No calculators allowed!

1. Write the percent as a fraction. Then simplify the fraction completely.
   \[ 135\% = \square \text{ (Simplify your answer)} \]

2. Write the following sentence with the percent as a simplified fraction.
   37.5\% of the book sales at a bookshop are romance novels.
   At a bookshop, \square \text{ of the book sales a romance novels. (Simplify your answer)}

3. Write the given percent as a decimal.
   \[ 182\% = \square \text{ (Type an integer or a decimal.)} \]

4. Write the given percent as a decimal.
   \[ 2\% = \square \text{ (Type an integer or a decimal)} \]

5. Write the following decimal as a percent.
   \[ 0.046 = \square \% \text{ (Type an integer or a decimal)} \]

6. Write the fraction as a percent.
   \[ \frac{4}{5} = \square \% \]

7. Write the following fraction as a percent.
   If necessary, round the percentage to the nearest tenth.
   \[ \frac{9}{4} = \square \% \text{ (Type an integer or a decimal)} \]

8. Write the given percent as a decimal.
   \[ 97\frac{3}{8}\% = \square \text{ (Type an integer or a decimal.)} \]

9. A family has a monthly income of $3500 and plans to spend 10\% of this amount on entertainment.
   The family will spend $\square$ on entertainment.

10. A family has a monthly income of $2700 and plans to spend 8\% of this amount on entertainment.
    The family will spend $\square$ on entertainment.

11. Each time Gertrude gets paid, 10\% of her pay check goes to taxes. Last week, $50 was taken out of her check for taxes. What was the amount of Gertrude's pay check last week?
    $\square$

12. On a test Maj Ling got 86\%, or 73.1, of the items correct. (There was partial credit on some items.) How many items were on the test?
    There were $\square$ items on the test. (Simplify your answer. Type an integer or a decimal)
13. A woman earns $2300 per month and budgets $345 per month for food. What percent of her monthly income is spent on food?

The woman spends □% of her monthly income on food.

14. For the food described, find what percent of total calories is from fat. If necessary, round to the nearest tenth of a percent.

\[
\text{Nutrition Facts}
\begin{array}{|c|c|}
\hline
\text{Serving Size} & 8 \text{ crackers (29g)} \\
\hline
\text{Serving Per Container About 9} & \\
\hline
\text{Amount Per Serving} & \\
\hline
\text{Calories} & 11 \\
\text{Calories from Fat} & 25 \\
\hline
\end{array}
\]

□% of total calories are from fat.

15. A family has a monthly income of $3800 and plans to spend 11% of this amount on entertainment. What amount will not be spent on entertainment?

The amount not spent on entertainment will be $ □.

16. Translate to an equation and solve. Let n be the unknown number.

20% of 11 is what number?

n = □ (Type a whole number or a decimal)

17. What is 10.5% of 220?

n = □ (Type a whole number or a decimal)

18. Solve.

10% of 96 is what number?

10% of 96 is □.

19. Translate to an equation and solve. Let x be the unknown number.

90% of 91 is what number?

x = □ (Type an integer or decimal.)

20. Translate word for word to an equation, then solve.

60% of what number is 18?

20% of □ is 18.

21. Solve.

5 is what percent of 50?

5 is □% of 50.

22. Find the missing value.

What percent of 76 is 38?

□% of 76 is 38. (Type an integer or a decimal.)

23. Jayne works for a computer store and earn 5% of the purchase price on everything she sells. On Wednesday, she earned $94. What was the dollar value of the computer equipment she sold?

Jayne sold $□ in computer equipment.

24. In a medical study of pregnant women with poor diets, 18 women, or 6%, had babies in good or excellent health. How many women were in the original study?

□ women were in the original study.

25. A woman bought a bouquet of flowers for $56 plus tax. If the sales tax rate in her state is 5.5% how much did the woman pay at the register?

The woman paid $□ at the register. (Type an integer or a decimal.)
26. A salesperson earned a commission of $1308.60 for selling $7270 worth of paper products. Find the commission rate.

The commission rate is □%.

27. A $210 Suit is on sale for a 20% discount.

Find the amount of the discount and the sale price.

<table>
<thead>
<tr>
<th>Original Price</th>
<th>Rate of Discount</th>
<th>Discount</th>
<th>Sale Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>$210</td>
<td>20%</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

28. A diamond ring which normally sells for $1240 is on sale for $868. What is the amount of discount?

What is the amount of discount?
□ $ (Simplify your answer. Type an integer or a decimal)

What is the rate of discount?
□% (Simplify your answer. Type an integer or a decimal).

29. The amount in a saving account increased from $250 to $260. What was the percent of increase?

The percent of increase was □%.
(Simplify your answer. Type an integer or a fraction.)

30. For the month of December, sales at Sporting Goods were at an all-time high at $32,000. As always happens, though, January sales were much lower, at only $20,000. What was the percent decrease in sales from December to January?

The decrease in sales from December to January was □%. (Type an integer or a decimal.)

31. Lupe put $24,000 in a certificate of deposit that gained interest at a rate of 8.5%. Find the amount of simple interest earned after 4 months.

The account gained □$ interest after 4 months. (Round to the nearest cent as needed)

Evaluate the expression using a rule for exponents.

32. $9^1 =$
33. $(-10)^1 =$
34. $(-5)^0 =$
35. $(-9)^0 =$

Write the product as one base with one exponent. (Type your answer using exponential notation.)

36. $x^4 \cdot x^7 =$
37. $a^2 \cdot a =$

Simplify the expression. (Type your answer using exponential notation.)

38. $(x^7)^2 =$
39. $(p^1)^6 =$
40. $(p^3)^6 \cdot (p^5)^4 =$

Identify the terms in algebraic expression.

41. $5x^3 + 2x$

□ (Use a comma to separate answers as needed.)

42. $x^2 \cdot y - \frac{1}{7}xy^4 - \frac{5}{2}$

Choose the correct answer below.

a. $-x^2y, \frac{1}{7}xy^4, and -\frac{5}{2}$
b. $x^2y, -\frac{1}{7}xy^4, and -\frac{5}{2}$
c. $-x^2y, -\frac{1}{7}xy^4, and -\frac{5}{2}$
d. $x^2y, -\frac{1}{7}xy^4, and -\frac{5}{2}$
Evaluate the polynomial with the given replacement value.

43. \(-6q - 6, \quad q = -5\)
   \(-6q - 6 =\)

44. \(x^2 + 4x, \quad x = -3\)
   \(x^2 + 4x =\)

45. \(-y^2 + 4y - 9, \quad y = 6\)
   \(-y^2 + 4y - 9 =\)

46. For the given term, identify the variable factors and indicate the degree.
   \(-9x^3 y^2\)
   Identify the variable factors.

☐ (Write your answer in expanded form. Factor completely.)

Write the degree.

☐ (Write a whole number)

Write the following polynomial in descending order.

47. \(9b + 7b^5 =\)
48. \(-3w^3 + 6 - 4w^5 =\)

Simplify the polynomial by combining like terms if possible. Write the answer in descending order.

49. \(8x^5 + 5x^5 =\)
50. \(-7x^5 - 7x^5 =\)
51. \(7x^4 - x^6 + 3x^4 =\)
52.
53. Terrence dropped a ball from the roof of a 1,400-foot-high building. The ball’s height above the ground after \(x\) seconds is given by \(h = 1,400 - 14x^2\). How high above the ground was the ball after falling 4 seconds?

The ball was ☐ feet above the ground.

54. Distribute.
   \(-1(8c + 5) =\)

55. Add.
   \((8x^2 - 6x) + (x - 4x^2) =\)

56. Add.
   \((6y^2 + y - 3) + (-4y^3 + 2y - 4) =\)

57. Subtract.
   \((-9c^3 - 5c + 6) - (-c^3 + 7c - 1) =\)

58. Subtract. Combine like terms, and write the answer in descending order.
   \((y^3 + 2y^2 + 5y) - (2y^2 + 5y - 7) =\)

59. Add.
   \((5x + 2) + (-6x + 1) =\)

Perform the indicated operations. Combine like terms and write the answer in descending order.

60. \((5w - 7) + (4 - 4w) =\)
61. \(3 - (6h + 3) =\)
1. \( \frac{27}{20} \)
2. \( \frac{3}{8} \)
3. 1.82
4. 0.02
5. 4.6
6. 80
7. 225
8. 0.97375
9. 350
10. 216
11. 500
12. 85
13. 15
14. 25
15. 3382
16. 2.2
17. 23.1
18. 9.6
19. 81.9
20. 30
21. 10
22. 50
23. 1,880
24. 300
25. 59.08
26. 18
27. Discount 42, Sale price 168
28. Discount 372, Rate 30
29. 4
30. 37.5
31. 680
32. 9
33. -10
34. 1
35. 1
36. \( x^{11} \)
37. \( a^3 \)
38. \( x^{14} \)
39. \( p^5 \)
40. \( p^{38} \)
41. 5x^3, 2x
42. B
43. 24
44. -3
45. -21
46. \( x \cdot x \cdot x \cdot y \cdot y \)
47. \( 7b^2 + 9b \)
48. \(-4w^5 - 3w^3 + 6 \)
49. \( 13x^5 \)
50. \(-14x^5 \)
51. \(-x^5 + 10x^4 \)
52. 1,176
53. -8c-5
54. \( 4x^2 - 5x \)
55. \( 2y^3 + 3y - 7 \)
56. \(-8c^3 - 12c + 7 \)
57. \( y^3 + 7 \)
58. \(-x + 3 \)
59. \( w - 3 \)
60. \(-6h \)