NAME_____ DATE_____

Module Test A — Module 7

Write each ratio as a percent.

1. 9 to 500

1.8%

2. $\frac{9}{4}$

225%

3. 4 : 1

400%

Answer each of the following.

4. What percent of 50 is 3?

6%

5. 230% of what number is 46?

20

6. What is 70% of 20?

14

Fill in the blanks with one of the following words:

markup **discount** **simple** **compound** **part** **whole** **percent**

7. A _____ is an amount subtracted from the original price of an item. **(discount)**

8. The number 40 is the _____when using the percent proportion to answer "10% of what number is 40?" **(part)**

9. _____ interest is calculated on both principal and interest already added on. **(Compound)**

10. The number 5 is the _____when using the percent proportion to answer "What percent of 5 is 2?" **(whole)**

Circle the correct answer for each problem.

11. Evaluate: $\sqrt{100} + 4^2 + \sqrt{36}$

a. 26 b. 32 c. 44 d. 72

32

12. Evaluate: $1^2 + \sqrt{64}$

a. 10 b. 65 c. 66 d. 9

9

13. Which number is not a perfect square number?

a. 121 b. 64 c. 20 d. 49

20

14. Which ratios are in proportion?

a. $\frac{8}{14} = \frac{12}{21}$ b. $\frac{2}{3} = \frac{6}{12}$ c. $\frac{2}{10} = \frac{3}{20}$ d. $\frac{3}{8} = \frac{8}{3}$

$\frac{8}{14} = \frac{12}{21}$

15. Which is a unit rate?

a. $\frac{8 \text{ books}}{3 \text{ days}}$ b. $\frac{10 \text{ calls}}{4 \text{ weeks}}$ c. $\frac{7 \text{ apples}}{1 \text{ pie}}$ d. $\frac{1 \text{ dog}}{2 \text{ cats}}$

$\frac{7 \text{ apples}}{1 \text{ pie}}$

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16. A store buys hammers from a hardware distributor for $2.50. How much will the store sell the hammers for if the markup is 420%?

The hammers will sell for $13.00 each.

17. Mary's fruit salad recipe calls for two cups of sliced peaches for every three cups of sliced bananas. How many cups of sliced bananas should she use if she has seven cups of sliced peaches?

Mary should use $10\frac{1}{2}$ cups of bananas.

18. Nelson saved $4,000 for $3\frac{1}{4}$ years at a rate of 3%. Find the amount of simple interest earned and the total amount in the account.

Interest: $390 **Total amount: $4,390**

19. Ms. Mendoza saved $6,000 at a rate of 4.5% compounded semiannually. Find the total amount after $1\frac{1}{2}$ years.

Total amount: $6,414.18

Answer the following questions.

20. Explain how to find the perimeter of a square if its area is 81 square feet.

Take the square root of the area to find the length of one side: $\sqrt{81} = 9$.
Multiply the length of one side by four to find the perimeter: $4 \times 9 = 36$.
The perimeter of the square is 36 feet.

21. Carrie is selling boxes of cookies at a rate of five boxes every three hours. Hazel is selling boxes of cookies at a rate of seven boxes every four hours. Complete the table and explain how to use it to find who sells cookies at a faster rate. Then explain how to use unit rates to find who sells cookies at a faster rate.

Carrie	
boxes	hours
5	3
10	6
15	9
20	12

Hazel	
boxes	hours
7	4
14	8
21	12
28	16

The table shows that in 12 hours, Carrie would have sold 20 boxes and Hazel would have sold 21 boxes, so Hazel is selling at a faster rate.

Hazel's unit rate of $1\frac{3}{4}$ boxes per hour is greater than Carrie's unit rate of $1\frac{2}{3}$ boxes per hour.