

### Solutions for Rumack's Preparation Workbook: 1.5

1. To find the answer, divide and convert to a mixed number. When dividing by 10, move the decimal one place to the left.  $\frac{102}{10} = 102 \div 10 = 10.2 = 10\frac{2}{10} = 10\frac{1}{5}$ . The answer is (D).
2. To multiply a number by 100, move the decimal to the right 2 places.  $2.36 \times 100 = 236$ . The answer is (C).
3. To find the product, multiply and simplify.  $\frac{3}{4} \times \frac{1}{10} \times \frac{1000}{25} = \frac{3000}{1000} = 3$ . When dividing by 1000, move the decimal 3 places to the left. The answer is (A).
4. To find out how much greater the value is, determine the two values and divide.  $A$  is in the ten thousands place, so the value is 10,000.  $B$  is in the thousands place, so the value is 1,000.  $A \div B = 10,000 \div 1,000 = 10$ . The answer is (C).
5. To find the dividend, change the question into multiplication and solve.  $L \div 10 = 14$ , Remainder 0;  $14 \times 10 = L$ ;  $L = 140$ . The answer is (A).
6. To turn a percentage into a decimal number, divide by 100.  $12.5\% = \frac{12.5}{100} = 0.125$ . The answer is (D).
7. To find the difference, find a common denominator, subtract, and simplify if possible.  $10 - \frac{1}{10} - \frac{2}{10} - \frac{3}{10} - \frac{4}{10} = \frac{90}{10} - \frac{4}{10} - \frac{2}{10} - \frac{3}{10} - \frac{4}{10} = \frac{81}{10} = 8\frac{1}{10}$ . The answer is (D).
8. To find the difference, first find the values of  $M$  and  $N$ , then subtract. Find  $M$ :  $M \div 11 = 10$ ,  $10 \times 11 = M$ ,  $M = 110$ . Find  $N$ :  $N \div 11 = 9$  remainder 1.  $9 \times 11 + 1 = N$ .  $99 + 1 = N$ ,  $N = 100$ . Subtract:  $M - N = 110 - 100 = 10$ . The answer is (C).
9. To find the answer, multiply and then simplify.  $\frac{1}{20} \times 100 = \frac{100}{20} = \frac{100 \div 20}{20 \div 20} = \frac{5}{1} = 5$ . The answer is (B).
10. To find the closest product, multiply and then consider how close each answer choice is to the actual product.  $200 \times 0.12 = 24$ , which is closest to (A).
11. To find the equivalent decimal number, convert the mixed number percentage into a decimal number percentage and then divide by 100.  $10\frac{3}{4}\% = 10.75\% = \frac{10.75}{100} = 0.1075$ . The answer is (C).
12. To find the answer, identify the place value and then find the equivalent answer choice.  $3 \times 10^2 = 3 \times 100 = 300$ . The answer is (C).
13. To find the equal amount of money, add the coins.  $3 \times \$0.25 + 4 \times \$0.10 + 5 \times \$0.05 = \$0.75 + \$0.40 + \$0.25 = \$1.40$ . The answer is (C).

14. To find the equivalent fraction of a percent, create a fraction with the percent as the numerator and 100 as the denominator. Then eliminate the decimals (by multiplying both numerator and denominator by 10) and simplify.  $5.2\% = \frac{5.2}{100} = \frac{5.2 \times 10}{100.0 \times 10} = \frac{52}{1000} = \frac{52 \div 4}{1000 \div 4} = \frac{13}{250}$ . The answer is (E).

15. To find the percentage of a number, convert the percent to a decimal and multiply.  $25\%$  of  $420 = 0.25 \times 420 = 105$ . The answer is (D).

16. To find the number of which 70 is 40%, set up an equation, write the percent as a decimal, and divide the numerator by this decimal.  $\frac{70}{\text{number}} = 40\%$ ,  $\frac{70}{\text{number}} = 0.4$ ,  $\frac{70}{0.4} = 700 \div 4 = 175$ . The answer is (A).

17. To find the percentage, put the given numbers into a fraction, divide the numerator by the denominator, and multiply the result by 100.  $\frac{8}{64} = 0.125$ ,  $0.125 \times 100\% = 12.5\%$ . The answer is (B).

18. To find the equivalent expression, rewrite the original expression beginning with a factor of 4.  $20 \times 200 = 4 \times 1000$ . The answer is (E) None of the above.

19. To find the quotient, divide. Since the divisor, 0.3, is a decimal number, move the decimal one place to the right to make it whole. Then, the decimal in the dividend, 11.1, must also be moved one place right.  $11.1 \div 0.3 = 111 \div 3 = 37$ . The answer is (C).

20. To find the quotient, divide.  $10.11 \div 2 = 5.055$ . The answer is (B) 5.055

21. To find the product, multiply.  $11.44 \times 4 = 45.76$ . The answer is (D) 45.76.

22. To find the product, multiply. Since both factors being multiplied each have one digit after the decimal (two combined), the product will have two digits after the decimal.  $12.3 \times 4.5 = 55.35$ . The answer is (D).

23. To figure out the number of factors, list them.  $1000 = 10^3$ ,  $100 = 10^2$ ,  $10 = 10^1$ ,  $1 = 10^0$ . The answer is (A) 4.

24. To find the equivalent answer choice, simplify each one and compare with the given fraction. The answer is (C), since  $\frac{300}{25} + \frac{20}{25} + \frac{1}{25} = \frac{321}{25}$ .

25. To find the answer, identify the place value and then find the equivalent answer.  $50,000 = 5 \times 10,000 = 5 \times 10^4$ . The answer is (D).