Arithmetic Sample Questions

Solve the following problems and select your answer from the choices given. You may use the paper you have been given for scratch paper.

1. 2.75 + .003 + .158 =
   A. 4.36
   B. 2.911
   C. 0.436
   D. 2.938

2. 7.86 × 4.6 =
   A. 36.156
   B. 36.216
   C. 351.56
   D. 361.56

3. $\frac{7}{20}$ =
   A. 0.035
   B. 0.858
   C. 0.35
   D. 3.5

4. Which of the following is the least?
   A. 0.105
   B. 0.501
   C. 0.015
   D. 0.15

5. All of the following are ways to write 25 percent of N EXCEPT
   A. 0.25 N
   B. $\frac{25N}{100}$
   C. $\frac{1}{4}$ N
   D. 25 N

6. Which of the following is closest to 27.8 × 9.6?
   A. 280
   B. 300
   C. 2,800
   D. 3,000

7. A soccer team played 160 games and won 65 percent of them. How many games did it win?
   A. 94
   B. 104
   C. 114
   D. 124

8. Three people who work full-time are to work together on a project, but their total time on the project is to be equivalent to that of only one person working full-time. If one of the people is budgeted for one-half of his time to the project and a second person for one-third of her time, what part of the third worker's time should be budgeted to this project?
   A. $\frac{1}{3}$
   B. $\frac{3}{5}$
   C. $\frac{1}{6}$
   D. $\frac{1}{8}$

9. 32 is 40 percent of what number?
   A. 12.8
   B. 128
   C. 80
   D. 800

10. $3\frac{1}{3} - 2\frac{2}{5}$ =
    A. $1\frac{1}{2}$
    B. $\frac{1}{15}$
    C. $\frac{14}{15}$
    D. $1\frac{1}{15}$

Elementary Algebra Sample Questions

Solve the following problems and select your answer from the choices given. You may use the paper you have been given for scratch paper.

1. If A represents the number of apples purchased at 15 cents each, and B represents the number of bananas purchased at 10 cents each, which of the following represents the total value of the purchases in cents?
   A. A + B
   B. 25(A + B)
   C. 10A + 15B
   D. 15A + 10B

2. $\sqrt{2} \times \sqrt{15} = ?$
   A. 17
   B. 30
   C. $\sqrt{30}$
   D. $\sqrt{17}$

3. What is the value of the expression $2x^2 + 3xy - 4y^2$ when $x = 2$ and $y = -4$?
   A. -80
   B. 80
   C. -32
   D. 32

4. In the figure below, both circles have the same center, and the radius of the larger circle is R. If the radius of the smaller circle is 3 units less than R, which of the following represents the area of the shaded region?

   A. πR^2
   B. $\pi(R - 3)^2$
   C. $\pi R^2 - \pi \times 3^2$
   D. $\pi R^2 - \pi(R - 3)^2$

5. $(3x - 2y)^2 =$
   A. $9x^2 - 4y^2$
   B. $9x^2 + 4y^2$
   C. $9x^2 + 4y^2 - 6xy$
   D. $9x^2 + 4y^2 - 12xy$

6. If $x > 2$, then $\frac{x^2 - x - 6}{x^2 - 4} =$
   A. $\frac{x - 3}{2}$
   B. $\frac{x - 3}{x - 2}$
   C. $\frac{x - 3}{x + 2}$
   D. $\frac{3}{2}$

7. $\frac{4 - (-6)}{-5} =$
   A. $\frac{2}{5}$
   B. $-\frac{2}{5}$
   C. 2
   D. -2

8. If $2x - 3(x + 4) = -5$, then $x =$
   A. 7
   B. -7
   C. 17
   D. -17

9. $-3(5 - 6) - 4(2 - 3) =$
   A. -7
   B. 7
   C. -1
   D. 1

10. Which of the following expressions is equivalent to $20 - \frac{4}{5}x \geq 16$?
    A. $x \leq 5$
    B. $x \geq 5$
    C. $x \geq 32½$
    D. $x \leq 32½$