

## Accuplacer Elementary Algebra Sample Problems

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Solve the following problems and choose your answer from the alternatives 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?

- 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

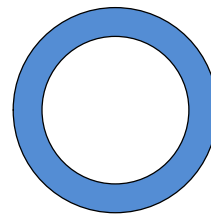
$$2x^2 + 3xy - 4y^2$$

when

$$x = 2 \text{ and } y = -4?$$

- 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)  $\pi R^2$
- 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)  $9x^2 + 4y^2 - 12xy$

7.  $\frac{4 - (-6)}{-5} =$

- A)  $\frac{2}{5}$
- B)  $-\frac{2}{5}$
- C) 2
- D) -2

9.  $-3(5 - 6) - 4(2 - 3) =$

- A) -7
- B) 7
- C) -1
- D) 1

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)  $\frac{3}{2}$

8. If  $2x - 3(x + 4) = -5$ , then  $x =$

- A) 7
- B) -7
- C) 17
- D) -17

10. If  $20 - \frac{4}{5}x \geq 16$ , then

- A)  $x \leq 5$
- B)  $x \geq 5$
- C)  $x \geq 32\frac{1}{2}$
- D)  $x \leq 32\frac{1}{2}$