

## Exercises – Factoring Differences of Squares and Perfect Square Trinomials

1

$$3x^2 - 48$$

Which of the following is equivalent to the expression above?

- A)  $3(x-4)(x+4)$
- B)  $3(x-4)^2$
- C)  $(3x-4)(x+4)$
- D)  $(3x+4)(x-4)$

2

$$x - 6\sqrt{x} - 16$$

Which of the following is equivalent to the expression above?

- A)  $(\sqrt{x} - 4)^2$
- B)  $(\sqrt{x} - 4)(\sqrt{x} + 4)$
- C)  $(\sqrt{x} + 8)(\sqrt{x} - 2)$
- D)  $(\sqrt{x} - 8)(\sqrt{x} + 2)$

3

If  $x^2 + y^2 = 10$  and  $xy = -3$ , what is the value of  $(x - y)^2$ ?

- A) 12
- B) 16
- C) 20
- D) 25

4

If  $x + y = 10$  and  $x - y = 4$ , what is the value of  $x^2 - y^2$ ?

- A) 20
- B) 24
- C) 36
- D) 40

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$$6x^2 + 7x - 24 = 0$$

If  $r$  and  $s$  are two solutions of the equation above and  $r > s$ , which of the following is the value of  $r - s$ ?

- A)  $\frac{7}{6}$
- B)  $\frac{16}{3}$
- C)  $\frac{25}{6}$
- D)  $\frac{20}{3}$

6

$$x^2 - 3x = 28$$

If  $r$  and  $s$  are two solutions of the equation above, which of the following is the value of  $r + s$ ?

- A) -3
- B) 3
- C) 6
- D) 9