

Factor Algebraic Expressions

Question 1 .

Factor the polynomial below.

$$x^2 - 64$$

- A. $(8 - x)^2$
- B. $(x + 8)(x - 8)$
- C. $(8 + x)(8 - x)$
- D. $(x - 8)^2$

Question 2 .

Factor the following polynomial completely.

$$0.3x^2 - 2.1x + 1.8$$

- A. $0.3(x - 1)(x + 6)$
- B. $0.3(x - 1)(x - 6)$
- C. $0.3(x^2 - 7x + 6)$
- D. $-0.3(x^2 + 7x + 6)$

Question 3 .

Factor the following polynomial completely.

$$-3x^3 - 18x^2 + 21x$$

- A. $-3(x^3 + 6x^2 - 7x)$
- B. $-3x(x + 7)(x - 1)$
- C. $3x(x + 7)(x - 1)$
- D. $-3(x^2 + 7)(x + 1)$

Question 4 .

Factor the polynomial below.

$$x^2 - 10x + 25$$

- A. $2x^2 - 25$
- B. $(x - 10)^2$
- C. $x^2 - 25$
- D. $(x - 5)^2$

Question 5 .

Factor the following expression completely.

$$x^4 - 81$$

- A. $(x - 3)(x + 3)(x - 3)(x + 3)$
- B. $(x - 3)(x + 3)(x^2 + 9)$
- C. $(x - 3)(x^3 + 27)$
- D. $(x^2 - 9)(x^2 + 9)$

Question 6 .

Factor the following polynomial completely.

$$-0.5x^2 - 2x + 16$$

- A. $-0.5(x + 8)(x - 4)$
- B. $-0.5(x^2 + 4x - 32)$
- C. $-0.5(x + 8)(x + 4)$
- D. $0.5(x + 8)(x - 4)$

Question 7 .

Factor the following expression completely.

$$4x^2 - 36$$

- A. $4(x + 3)(x - 3)$
- B. $4(x^2 - 9)$
- C. $4(x - 3)^2$
- D. $(4x + 3)(x - 3)$

Question 8 .

Factor the following expression completely.

$$2x^2 - 72$$

- A. $(2x + 6)(x - 6)$
- B. $2(x - 6)^2$
- C. $2(x^2 - 36)$
- D. $2(x + 6)(x - 6)$

Question 9 .

Factor the polynomial completely.

$$5x^3y + 30x^2y + 40xy$$

- A. $5xy(x + 4)(x + 2)$
- B. $xy(5x + 4)(x + 10)$
- C. $5xy(x^2 + 6x + 8)$
- D. $5xy(x + 8)(x + 1)$

Question 10 .

Factor the following polynomial.

$$6x^2 + 10x$$

- A. $2x(3x + 5)$
- B. $2x(3x + 10)$
- C. $2x^2(3x + 5)$
- D. $2(3x + 5)$

