

STANDARD I: The student will be able to perform basic operations on algebraic expressions.

OBJECTIVE

4. Factor polynomials.

ELIGIBLE CONTENT

- The following factoring may be required:
 - difference of two squares
 - greatest common monomial
 - trinomial
 - common binomial
- Options will be factored completely.

Tips:

Combine any like terms.

Look for GCF.

See if a trinomial fits the "perfect square trinomial" pattern, if not, factor trinomials using the "magic number" method.

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SAMPLE ITEMS

1 Factor: $9x^2 - 9$

- A $9(x-1)$
- B $9(x-1)^2$
- C $3(x+3)(3x-1)$
- D $9(x+1)(x-1)$

2 Factor: $4x(x+1) + (x+1)$

- A $4x(x+1)$
- B $4x(x+1)^2$
- C $(4x+1)(x+1)$
- D $(4x+1)(x+1)^2$

3 Factor: $2m^3 - 10m^2 + 8m$

- A $2m(m+2)(m+2)$
- B $2m(m-2)(m-2)$
- C $2m(m+4)(m+1)$
- D $2m(m-4)(m-1)$

4 Factor: $x^2 - x - 2$

- A $(x+1)(x-2)$
- B $(x-1)(x-2)$
- C $(x+1)(x+2)$
- D $(x-1)(x+2)$

5 Factor: $2x^2 - 5x - 12$

- A $(x+6)(x-2)$
- B $(2x-1)(x-12)$
- C $(2x+3)(x-4)$
- D $(2x-3)(x+4)$

6 Factor: $81a^4 - 16$

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

7 What is the greatest common factor of $24xy^2$ and $16x^2y$?

- A $4xy$
- B $8xy$
- C $2x^2y^2$
- D $8x^2y^2$