

1. Simplify: $(3b^2c)(8b^3c^6)$
- A $11b^5c^7$
- B $24b^6c^6$
- C $24b^5c^7$
- D $11b^6c^6$
2. Evaluate $|3x + 2| - 4$ when $x = -4$.
- A 10
- B 6
- C -12
- D -14
3. Simplify: $9\sqrt{32} - 3\sqrt{18} + 6\sqrt{50}$
- A $-75\sqrt{2}$
- B $-57\sqrt{2}$
- C $57\sqrt{2}$
- D $75\sqrt{2}$
4. If $a = 3$ and $b = -2$, what is the value of $\frac{2a + ab^3}{7(a - 5b)}$?
- A $\frac{-210}{31}$
- B $\frac{-210}{91}$
- C $\frac{-18}{31}$
- D $\frac{-18}{91}$
5. Simplify: $-2xy(-3xy^2 + 4x^2y)$
- A $-2x^3y^3$
- B $-14x^3y^3$
- C $-6x^2y^2 - 8x^2y^2$
- D $6x^2y^3 - 8x^3y^2$
6. Simplify: $(x + 2)(x^2 + 2x + 3)$
- A $x^3 + 7x + 6$
- B $5x^2 + 7x + 6$
- C $2x^3 + x^2 + x + 6$
- D $x^3 + 4x^2 + 7x + 6$

7. A rectangular pen has a length 3 feet greater than its width. If both dimensions are increased by 5 feet, which expression gives the resulting **increase** in area?
- A $10x + 40$
- B $13x + 40$
- C $x^2 + 13x + 40$
- D $x^2 + 10x + 40$
8. Simplify: $\frac{14c^3d^2 - 21c^2d^3}{14cd^2}$
- A $c^2 - \frac{3cd}{2}$
- B $c^2 - \frac{3c^2d}{2}$
- C $c^2 - 21c^2d^2$
- D $c^2d - \frac{3cd}{2}$
9. What is the greatest common factor of $15x^6y^5 - 27x^4y^6 + 24x^3y$?
- A $3x^3y^5$
- B $3x^3y$
- C $3x^4y^5$
- D $3x^2y$
10. What is the greatest common factor of $2r^6st^2 - 2r^3s^3t + 16r^2s^3t$?
- A $16r^{11}s^7t^6$
- B $16r^5s$
- C $2r^2st$
- D $2rst$
11. Which binomial is a factor of $3x^2 + 2x - 5$?
- A $3x - 1$
- B $x - 1$
- C $3x - 5$
- D $x - 5$

End of Goal 1 Sample Items

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Answers to EOC Mathematics Algebra I Sample Items

Goal 1

1. Objective 1.01

Operate with real numbers to solve a variety of problems. a) Apply the laws of exponents to perform operations on expressions with integral exponents. b) Evaluate absolute value expressions. c) Evaluate radical expressions. d) Evaluate algebraic expressions.

Thinking Skill: Applying

Correct Answer: C

2. Objective 1.01

Operate with real numbers to solve a variety of problems. a) Apply the laws of exponents to perform operations on expressions with integral exponents. b) Evaluate absolute value expressions. c) Evaluate radical expressions. d) Evaluate algebraic expressions.

Thinking Skill: Applying

Correct Answer: B

3. Objective 1.01

Operate with real numbers to solve a variety of problems. a) Apply the laws of exponents to perform operations on expressions with integral exponents. b) Evaluate absolute value expressions. c) Evaluate radical expressions. d) Evaluate algebraic expressions.

Thinking Skill: Applying

Correct Answer: C

4. Objective 1.01

Operate with real numbers to solve a variety of problems. a) Apply the laws of exponents to perform operations on expressions with integral exponents. b) Evaluate absolute value expressions. c) Evaluate radical expressions. d) Evaluate algebraic expressions.

Thinking Skill: Applying

Correct Answer: D

5. Objective 1.02

Operate with polynomials. a) Add, subtract, and multiply polynomials. b) Divide polynomials by monomial divisors.

Thinking Skill: Applying

Correct Answer: D

6. Objective 1.02

Operate with polynomials. a) Add, subtract, and multiply polynomials. b) Divide polynomials by monomial divisors.

Thinking Skill: Applying

Correct Answer: D

7. Objective 1.02

Operate with polynomials. a) Add, subtract, and multiply polynomials. b) Divide polynomials by monomial divisors.

Thinking Skill: Integrating

Correct Answer: A

Answers to EOC Mathematics Algebra I Sample Items

Goal 1

8. Objective 1.02

Operate with polynomials. a) Add, subtract, and multiply polynomials. b) Divide polynomials by monomial divisors.

Thinking Skill: Applying

Correct Answer: A

9. Objective 1.03

Factor polynomials. a) Find the greatest common factor of a polynomial. b) Factor quadratic expressions.

Thinking Skill: Analyzing

Correct Answer: B

10. Objective 1.03

Factor polynomials. a) Find the greatest common factor of a polynomial. b) Factor quadratic expressions.

Thinking Skill: Analyzing

Correct Answer: C

11. Objective 1.03

Factor polynomials. a) Find the greatest common factor of a polynomial. b) Factor quadratic expressions.

Thinking Skill: Applying

Correct Answer: B