

A.A.14: Division of Polynomials: Divide a polynomial by a monomial or binomial, where the quotient has no remainder

- 1 When $3x^2 - 6x$ is divided by $3x$, the result is
 - 1) $-2x$
 - 2) $2x$
 - 3) $x + 2$
 - 4) $x - 2$
- 2 What is $6x^3 + 4x^2 + 2x$ divided by $2x$?
 - 1) $3x^2 + 2x$
 - 2) $3x^2 + 2x + 1$
 - 3) $4x^2 + 2x$
 - 4) $4x^2 + 2x + 1$
- 3 When $6y^6 - 18y^3 - 12y^2$ is divided by $-3y^2$, the quotient is
 - 1) $2y^4 - 6y^2 - 4y$
 - 2) $3y^4 + 6y + 4$
 - 3) $-2y^4 + 6y + 4$
 - 4) $-2y^3 - 6y^2 - 4y$
- 4 The expression $(50x^3 - 60x^2 + 10x) \div 10x$
 - 1) $5x^2 - 6x + 1$
 - 2) $5x^3 - 6x^2 + x$
 - 3) $5x^2 - 60x^2 + 10x$
 - 4) $5x^2 - 6x$
- 5 If $x \neq 0$, the expression $\frac{x^2 + 2x}{x}$ is equivalent to
 - 1) $x + 2$
 - 2) 2
 - 3) $3x$
 - 4) 4
- 6 Which expression represents $\frac{12x^3 - 6x^2 + 2x}{2x}$ in simplest form?
 - 1) $6x^2 - 3x$
 - 2) $10x^2 - 4x$
 - 3) $6x^2 - 3x + 1$
 - 4) $10x^2 - 4x + 1$
- 7 Which polynomial is the quotient of $\frac{6x^3 + 9x^2 + 3x}{3x}$?
 - 1) $2x^2 + 3x + 1$
 - 2) $2x^2 + 3x$
 - 3) $2x + 3$
 - 4) $6x^2 + 9x$
- 8 Express in simplest form: $\frac{45a^4b^3 - 90a^3b}{15a^2b}$

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Answer Section

- 1 ANS: 4 REF: 060506a
 2 ANS: 2 REF: 080817a
 3 ANS: 3 REF: spring9807a
 4 ANS: 1 REF: 010724a
 5 ANS: 1

$$\frac{x^2 + 2x}{x} = x + 2$$

REF: 010109a

- 6 ANS: 3

$$\frac{12x^3 - 6x^2 + 2x}{2x} = \frac{2x(6x^2 - 3x + 1)}{2x} = 6x^2 - 3x + 1$$

REF: 011011ia

- 7 ANS: 1

$$\frac{3x(2x^2 + 3x + 1)}{3x} = 2x^2 + 3x + 1$$

REF: 060102a

- 8 ANS:

$$3a^2b^2 - 6a \cdot \frac{45a^4b^3 - 90a^3b}{15a^2b} = \frac{45a^4b^3}{15a^2b} - \frac{90a^3b}{15a^2b} = 3a^2b^2 - 6a$$

REF: 081031ia