

# Polynomials and Factoring – Guided Practice

<p>Which of the following is equivalent to <math>\frac{a^{12}b^2}{a^3b^6}</math> ?</p> <p><input type="radio"/> A <math>\frac{a^9}{b^4}</math></p> <p><input type="radio"/> B <math>\frac{b^4}{a^9}</math></p> <p><input type="radio"/> C <math>\frac{a^4}{b^3}</math></p> <p><input type="radio"/> D <math>a^9b^4</math></p>	<p>Which expression is equivalent to <math>\frac{18c^8d^9}{9c^3d^6}</math> ?</p> <p>Assume the denominator does not equal zero.</p> <p><input type="radio"/> A <math>2c^5d^3</math></p> <p><input type="radio"/> B <math>9c^5d^3</math></p> <p><input type="radio"/> C <math>2c^{11}d^{15}</math></p> <p><input type="radio"/> D <math>9c^{11}d^{15}</math></p>
<p>Which polynomial is equivalent to <math>(18n^2 - 9n + 1) \div (3n - 1)</math> ?</p> <p>Assume the divisor is not equal to zero.</p> <p><input type="radio"/> A <math>6n - 1</math></p> <p><input type="radio"/> B <math>6n + 1</math></p> <p><input type="radio"/> C <math>6n^2 - 3</math></p> <p><input type="radio"/> D <math>18n^2 - 3</math></p>	<p>Simplify:</p> $5(-2n + 4) - 2(n + 3)$
<p>Simplify:</p> $(3x - 3)(2x + 1)$	<p>Simplify:</p> $(x - 2x + 1)(x^2 + 2x^2 - x + 3)$

Which of the following binomials is a factor of  $x^2 - x - 6$  ?

- ☐ A  $x - 1$
- ☐ B  $x - 2$
- ☐ C  $x - 3$
- ☐ D  $x - 6$

Which is a factor of  $2n^2 - 5n - 42$  ?

- ☐ A  $2n - 7$
- ☐ B  $2n - 6$
- ☐ C  $n - 7$
- ☐ D  $n - 6$

Identify each expression that is a factor of this polynomial.

$$4x^2 - 2x - 2$$

<input type="checkbox"/> $2x + 1$	<input type="checkbox"/> $2$	<input type="checkbox"/> $x - 1$	<input type="checkbox"/> $2x - 1$	<input type="checkbox"/> $4x - 1$
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Which binomial is a factor of  $c^2 - 12c + 32$  ?

- ☐ A  $c - 12$
- ☐ B  $c - 8$
- ☐ C  $c - 2$
- ☐ D  $c - 1$

Factor completely:

$$-18a^2 - 12a - 2$$

Factor completely:

$$2x^2 - 200$$