

**Intermediate Algebra**  
**Chapter 3/4 Test**

1. Solve a system of equations

Solve using substitution: $5x - 2y = 4$ $y - 3x = -3$	Solve using addition (elimination): $3x - 2y = 13$ $4x + y = 21$
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2. Add or subtract polynomials

$(5x^2 - 7x + 2) + (3x^2 - 2x + 4)$	$(8x^2 - 2x + 1) - (5x^2 - 4x - 7)$
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3. Multiply polynomials

$(4x - 1)(7x + 2)$	$4x(x^2 - 3x + 1)$
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4. Find the special product

$$(x - 3)^2$$

5. Divide using long division

$\frac{x^2 - 3x + 5}{x - 2}$	$\frac{4x + x^3 + 2}{x - 2}$
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6. Divide using synthetic division

$\frac{x^3 - 4x^2 + 8x - 1}{x + 1}$	$\frac{x^5 - 4}{x - 2}$
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