

College Algebra, Chapter 1 Study Guide

1. One graphing, below are some examples (one of the test won't look like these but use the basic building blocks of graphing)

Graph: $y = x^{\frac{8}{9}} - x - \sqrt{x} $	Graph: $y = x^{\frac{1}{7}} + x^3 $	Graph: $y = x^2 - \sqrt[3]{x} - 2 $
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2. One of the following types

Solve: $\frac{4}{3}x - x = 7x - \frac{1}{5}x - 2$	Solve: $\frac{x-2}{4} = \frac{7}{3} - \frac{x}{6}$	Solve: $\frac{5x}{7} - \frac{x+5}{3} = -2$
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3. One of the following types

Solve: $\sqrt{x-7} = 3$	Solve: $8\sqrt{3x-1} = 16$	Solve: $3\sqrt{x+5} - 2 = 4$
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4. One of the following types:

Use the zero factor property to solve: $x^2 - 8x - 20 = 0$	Use the zero factor property to solve: $12x^2 - 11x + 2 = 0$	Use the zero factor property to solve: $9x^2 - 16 = 0$
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5. One of the following types:

Use the square root property to solve: $(x+3)^2 = 9$	Use the square root property to solve: $(3x-1)^2 = 24$	Use the square root property to solve: $(5x+2)^2 = -25$
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6. One of the following types:

Use completing the square to solve: $x^2 + 4x - 2 = 0$	Use completing the square to solve: $x^2 + 2x + 30 = 0$	Use completing the square to solve: $x^2 - 10x + 1 = 0$
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7. One of the following types:

Use the quadratic formula to solve: $x^2 + 2x + 5 = 0$	Use the quadratic formula to solve: $x^2 - 10x + 1 = 0$	Use the quadratic formula to solve: $x^2 - 12x + 20 = 0$
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8. One of the following types:

Use the u-substitution to solve: $x^4 - 7x^2 + 10 = 0$		
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9. One of the following types:

Solve: $ 5x - 2 = 3$	Solve: $4 7x - 1 = 8$	Solve: $5 2x + 3 - 1 = 9$
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10. One of the following types:

Solve: $ 4x - 1 < 3$	Solve: $ 5x + 2 \geq 4$	
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