

Solving Introductory Quadratic Equations

Cheat Sheet Assignment

Cheat Sheet 1

Solve the quadratic equation $9x^2 - 1 = 0$

Prompts:

- * Can you solve this equation algebraically by getting x alone?
- * Can you solve this equation algebraically by factoring?
- * Can you solve this equation using the table in your graphing calculator?
- * Can you solve this equation using Desmos?
- * What vocabulary is relevant for understanding or solving this problem?

Cheat Sheet 2

Solve the quadratic equation $60 = x^2 - 7x$

Prompts:

- * Can you solve this equation algebraically by getting x alone?
- * Can you solve this equation algebraically by factoring?
- * Can you solve this equation using the table in your graphing calculator?
- * Can you solve this equation using Desmos?
- * What additional vocabulary is relevant for understanding or solving this problem?

Cheat Sheet 3

Solve the quadratic equation $2x^2 - 27 = 15x$

Prompts:

- * Can you solve this equation algebraically by getting x alone?
- * Can you solve this equation algebraically by factoring?
- * Can you solve this equation using the table in your graphing calculator?
- * Can you solve this equation using Desmos?
- * What additional vocabulary is relevant for understanding or solving this problem?

Cheat Sheet 4

Find the zeros and vertex of the parabola represented by the function $f(x) = x^2 - 17x + 66$

Prompts:

- * Can you find the zeros algebraically?
- * Can you find the zeros with the graphing calculator?
- * Can you find the zeros with Desmos?
- * Can you find the vertex algebraically?
- * Can you find the vertex with the graphing calculator?
- * Can you find the vertex with Desmos?
- * What additional vocabulary, if any, is relevant for understanding or solving this problem?

Cheat Sheet 5

Consider the parabola with vertex $(1, 3)$ and zeros $(-2, 0)$ and $(4, 0)$. Create the function that represents this parabola.

Prompts:

- * Can you create the function based on the vertex?
- * Can you create the function based on the zeros?
- * Can you create the function using your graphing calculator?
- * What little change or changes could you make so the equation does not have any zeros?

Cheat Sheet 6

Solve the following quadratic equations, showing all work.

1. $x^2 - 10 = -10$	2. $3h^2 + 17h = -10$	3. $9b^2 = 16$
4. $7n^2 + 16n + 5 = 2n^2 + 3$	5. $-3n(2n - 5) = 0$	6. $3c^2 - 9c = 0$
7. $c^2 = 5c$	8. $x^3 - 5x^2 + 4x = 0$	9. $3x^3 - 9x^2 = 0$