

• Very important! Need to MASTER it to solve quadratic equations

When you have $ax^2 + bx + c = 0$

the solutions are

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

plug in values into formula

$$x = \frac{-(-9) \pm \sqrt{(-9)^2 - 4(1)(8)}}{2(1)}$$

$$x = \frac{9 \pm \sqrt{81 - 32}}{2}$$

$$x = \frac{9 \pm \sqrt{49}}{2}$$

Example solve

$$x^2 - 9x = -8$$

↑

First write in standard form

$$x^2 - 9x + 8 = 0$$

↑ ↑ ↑

$$a=1 \quad b=-9 \quad c=8$$

$$x = \frac{9+7}{2}$$

$$x = \frac{9-7}{2}$$

$$x = \frac{16}{2}$$

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

solutions →

$$x = 8$$

$$x = 1$$