Quadratic Formula

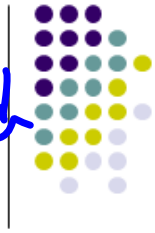
$$ax^2 + bx + c = 0$$

Standard form

Quadratic Formula

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

Solve using quadratic Formula



① Standard form

$x^2 + 5x - 14 = 0$

② Identify a, b, c

$a = 1 \quad b = 5 \quad c = -14$

③ Plug into the Quadratic formula

$$x = \frac{-5 \pm \sqrt{(5)^2 - 4(1)(-14)}}{2(1)}$$

④ Solve

$$x = \frac{-5 \pm \sqrt{81}}{2}$$

$$x = \frac{-5 \pm 9}{2}$$

$$x = \frac{-5+9}{2} = \frac{4}{2} = 2$$

$$x = \frac{-5-9}{2} = \frac{-14}{2} = -7$$

Solve using quadratic Formula

$$4x^2 = 8 - 3x$$

$+3x$

$4x^2 + 3x = 8$

$-8 \quad -8$

$4x^2 + 3x - 8 = 0$

$a = 4 \quad b = 3 \quad c = -8$

$$x = \frac{-3 \pm \sqrt{(3)^2 - 4(4)(-8)}}{2(4)}$$

$$x = \frac{-3 \pm \sqrt{137}}{8}$$