

Name:

Date:

Period:

HW #10-1

Solve each quadratic ^{by} ~~the~~ COMPLETING THE SQUARE! (not factoring, not quadratic formula...). Use the example below for reference. I also put a YouTube video link on the classroom website if you'd like to use that as well ☺

Example: Solve $x^2 + 8x - 3 = 0$

$$ax^2 + bx + \underline{\quad} = c + \underline{\quad}$$

$$x^2 + 8x + \underline{16} = 3 + \underline{16}$$

① move any constants to other side

$$(x + 4)(x + 4) = 19$$

$$\sqrt{(x + 4)^2} = \sqrt{19}$$

② $\div b$ by 2, and add its square in blank AND other side

③ simplify & take sq. root of both sides

$$x + 4 = \pm \sqrt{19}$$

$$\boxed{x = -4 \pm \sqrt{19}}$$

1. $x^2 - 2x = 5$

2. $r^2 + 10r = -7$

3. $w^2 - 8w = 9$

4. $p^2 + 10p - 4 = 0$

5. $k^2 - 4k - 7 = 0$

6. $-z^2 + 2z = 1$