Name:_____   Date:_____

Class/Home worksheet: Alg2H
Quadratic equation (II): Quadratic formula.
(book chapter 8, page 350 and onward)

(Warmup) Solve using complete the square

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

Steps:

1. Move the 3 to the other side

2. Divide by 4

3. Complete the square

4. Write as $(\cdot)^2$

5. Solve (taking + and − of square root)

$$\mathbf{ax^2 + bx + c = 0}$$

where a,b, and c are constants, and $a \neq 0$, is called **standard form of the quadratic equation.**

1. Solve:

$$4x^2 - 4x - 15 = 0$$

2. Solve:

$$9x^2 - 3x - 2 = 0$$

3. Solve (using the quadratic equation):

$$4x^2 - 9 = 0$$

4. Solve (using the quadratic equation):

$$16x^2 - x = 0$$

5. Solve :

$$x^2 + x(\sqrt{8} - \sqrt{2}) - 4 = 0$$

6. Solve:

$$\pi x^2 - 3x - 1 = 0$$

*Desmos activity

Quadratic formula and the MATH method

1. Solve using quadratic equation: $x^2 - 7x + 12 = 0$	2. Factor using MATH method: $x^2 - 7x + 12$
3. Solve using quadratic equation: $4x^2 - 1 = 0$	4. Factor using MATH method: $4x^2 - 1$
5. Solve using quadratic equation: $x^2 + 6x + 9 = 0$	6. Factor using MATH method: $x^2 + 6x + 9$
*Desmos	

Write it again

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(3) Solve:

$$x^2 + 4x - 5 = 0$$

(4) Solve:

$$x^2 - 2x - 15 = 0$$

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(5) Solve:

$$y^2 + 7y = 30$$

(6) Solve:

$$y^2 - 7y = 30$$

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(7) Solve :

$$2t^2 - 3t - 2 = 0$$

(8) Solve:

$$5m^2 + 3m - 2 = 0$$