Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_

Class/Home worksheet: Alg2H

Quadratic equation (II): Quadratic formula.

(book chapter 8, page 350 and onward)

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| (Warmup) Solve using complete the square$$4x^{2}-8x+3=0$$Steps:1. Move the 3 to the other side2. Divide by 43. Complete the square4. Write as $\left(⋅\right)^{2}$5. Solve (taking + and – of square root) |  |
| $$ax^{2}+bx+c=0$$ where a,b, and c are constants, and $a\ne 0$, is called **standard form of the quadratic equation.**  |

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| Write it again |
| 1. Solve:

$$4x^{2}-4x-15=0$$ | 1. Solve:

$$9x^{2}-3x-2=0$$ |
| 1. Solve (using the quadratic equation):

$$4x^{2}-9=0$$ | 1. Solve (using the quadratic equation):

$$16x^{2}-x=0$$ |
| 1. Solve :

$$x^{2}+x\left(\sqrt{8}-\sqrt{2}\right)-4=0$$ | 1. Solve:

$$πx^{2}-3x-1=0$$ |
| \*Desmos activity |

Quadratic formula and the MATH method

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| 1. Solve using quadratic equation:

$$x^{2}-7x+12=0$$ | 1. Factor using MATH method:

$$x^{2}-7x+12$$ |
| 1. Solve using quadratic equation:

$$4x^{2}-1=0$$  | 1. Factor using MATH method:

$$4x^{2}-1$$ |
| 1. Solve using quadratic equation:

$$x^{2}+6x+9=0$$ | 1. Factor using MATH method:

$$x^{2}+6x+9$$ |
| \*Desmos |

From the book, page 352

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| Write it again |
| (3) Solve:$$x^{2}+4x-5=0$$ | (4) Solve:$$x^{2}-2x-15=0$$ |
| (5) Solve:$$y^{2}+7y=30$$ | (6) Solve:$$y^{2}-7y=30$$ |
| (7) Solve :$$2t^{2}-3t-2=0$$ | (8) Solve:$$5m^{2}+3m-2=0$$ |