

Math II

Name _____ ID: 1

Quadratic Formula Practice

Date _____ Period _____

Solve each equation with the quadratic formula.

1) $3x^2 - 2x - 2 = 0$ $A=3$ $B=-2$ $C=-2$

$$\frac{-(-2) \pm \sqrt{(-2)^2 - 4(3)(-2)}}{2(3)} \rightarrow \frac{2 \pm \sqrt{28}}{-6} \rightarrow \frac{2 \pm 2\sqrt{7}}{-6}$$

$$X \approx -1.21 \quad X \approx 0.55$$

3) $-2x^2 + x + 5 = 0$ $A=-2$ $B=1$ $C=5$

$$\frac{-1 \pm \sqrt{1^2 - 4(-2)(5)}}{2(-2)} \rightarrow \frac{-1 \pm \sqrt{41}}{4}$$

$$X \approx 1.35 \quad X \approx -1.85$$

5) $-3n^2 - 3n + 4 = 0$ $A=-3$ $B=-3$ $C=4$

$$\frac{-(-3) \pm \sqrt{(-3)^2 - 4(-3)(4)}}{2(-3)} \rightarrow \frac{3 \pm \sqrt{57}}{-6}$$

$$X \approx -1.76 \quad X \approx 0.76$$

2) $-3n^2 - n + 1 = 0$ $A=-3$ $B=-1$ $C=1$

$$\frac{-(-1) \pm \sqrt{(-1)^2 - 4(-3)(1)}}{2(-3)} \rightarrow \frac{1 \pm \sqrt{13}}{-6}$$

$$X \approx -0.77 \quad X \approx 0.43$$

4) $-n^2 + 3n + 4 = 0$ $A=-1$ $B=3$ $C=4$

$$\frac{-3 \pm \sqrt{3^2 - 4(-1)(4)}}{2(-1)} \rightarrow \frac{-3 \pm \sqrt{25}}{-2} \rightarrow \frac{-3 \pm 5}{-2}$$

$$\frac{-3+5}{-2} = 1 \quad \frac{-3-5}{-2} = -4$$

6) $-3x^2 + 2x - 3 = 0$ $A=-3$ $B=2$ $C=-3$

$$\frac{-2 \pm \sqrt{2^2 - 4(-3)(-3)}}{2(-3)} \rightarrow \frac{-2 \pm \sqrt{-32}}{-6}$$

No Solution!

$$7) 2a^2 - a - 4 = 0 \quad A=2 \quad B=-1 \quad C=-4$$

$$\frac{-(-1) \pm \sqrt{(-1)^2 - 4(2)(-4)}}{2(2)} \rightarrow \frac{1 \pm \sqrt{33}}{4}$$

$$x \approx 1.69 \quad x \approx -1.19$$

$$9) -p^2 + 3p + 5 = 0 \quad A=-1 \quad B=3 \quad C=5$$

$$\frac{-(-3) \pm \sqrt{(3)^2 - 4(-1)(5)}}{2(-1)} \rightarrow \frac{-3 \pm \sqrt{29}}{-2}$$

$$x \approx -1.19 \quad x \approx 4.19$$

$$11) n^2 - 2n - 8 = 0 \quad A=1 \quad B=-2 \quad C=-8$$

$$\frac{-(-2) \pm \sqrt{(-2)^2 - 4(1)(-8)}}{2(1)} \rightarrow \frac{2 \pm \sqrt{36}}{2}$$

$$\frac{2+6}{2} \rightarrow 4 \quad \frac{2-6}{2} = -2$$

$$13) -x^2 - 2x - 2 = 0 \quad A=-1 \quad B=-2 \quad C=-2$$

$$\frac{-(-2) \pm \sqrt{(-2)^2 - 4(-1)(-2)}}{2(-1)} \rightarrow \frac{2 \pm \sqrt{-4}}{-2}$$

No Solution

$$8) -v^2 + 2v - 1 = 0 \quad A=-1 \quad B=2 \quad C=-1$$

$$\frac{-(-2) \pm \sqrt{(2)^2 - 4(-1)(-1)}}{2(-1)} \rightarrow \frac{-2 \pm \sqrt{0}}{-2} \rightarrow 1$$

$$10) v^2 + 2v + 1 = 0 \quad A=1 \quad B=2 \quad C=1$$

$$\frac{-(-2) \pm \sqrt{(2)^2 - 4(1)(1)}}{2(1)} \rightarrow \frac{-2 \pm \sqrt{0}}{2} \rightarrow -1$$

$$12) x^2 - x + 1 = 0 \quad A=1 \quad B=-1 \quad C=1$$

$$\frac{-(-1) \pm \sqrt{(-1)^2 - 4(1)(1)}}{2(1)} \rightarrow \frac{1 \pm \sqrt{-3}}{2}$$

No Solution

$$14) 3x^2 - 2x - 4 = 0 \quad A=3 \quad B=-2 \quad C=-4$$

$$\frac{-(-2) \pm \sqrt{(-2)^2 - 4(3)(-4)}}{2(3)} \rightarrow \frac{2 \pm \sqrt{52}}{6} \rightarrow \frac{2 \pm 2\sqrt{13}}{6}$$

$$x \approx 1.54 \quad x \approx -0.87$$

$$\frac{1 \pm \sqrt{13}}{3}$$

