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

$\frac{-(-2) \pm \sqrt{(-2)^2 - 4(3)(-2)}}{2(3)} \rightarrow \frac{2 \pm \sqrt{28}}{6} \rightarrow \frac{2 \pm 2\sqrt{7}}{6} \rightarrow \frac{1 \pm \sqrt{7}}{3}$

$x \approx 1.21 \quad x \approx -0.55$

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

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

$x \approx -0.77 \quad x \approx 0.43$

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

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

$x \approx 1.35 \quad x \approx 1.85$

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

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

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

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

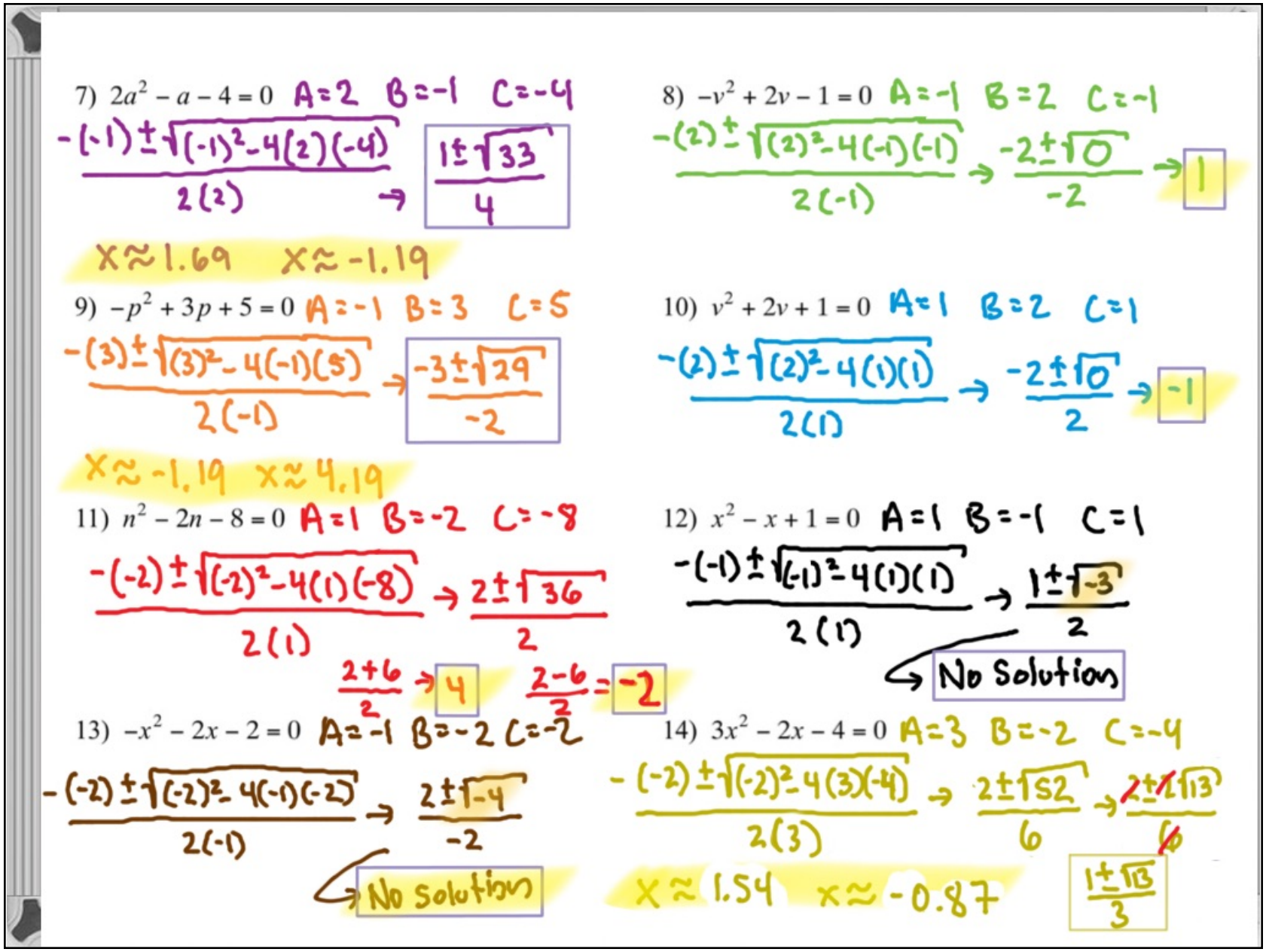
$\frac{-(-3) \pm \sqrt{(-3)^2 - 4(-3)(4)}}{2(-3)} \rightarrow \frac{3 \pm \sqrt{57}}{-6}$

$x \approx -1.76 \quad x \approx 0.76$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

No Solution

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

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

No Solution

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

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

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

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