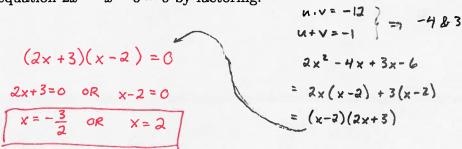
## Math 002 P1

Quiz #8

November 11, 2014 No electronic devices or interpersonal communication allowed. Show work to get credit.

(1) Solve the equation  $2x^2 - x - 6 = 0$  by factoring.



Name: Solutions

(2) Solve the equation  $2x^2 + 4x - 7 = 0$  by completing the square.

$$x^{2} + 2x - \frac{7}{2} = 0$$

$$x^{2} + 2x = \frac{7}{2}$$

$$(x + 1)^{2} = \frac{7}{2} + 1 = \frac{9}{2}$$

$$x + 1 = \pm \sqrt{\frac{9}{2}} = \pm \frac{3}{\sqrt{2}}$$

(3) Solve the equation  $9x^2 - 12x + 4 = 0$  by using the quadratic formula.

$$X = \frac{-(-12) \pm \sqrt{(-12)^2 - 4(9)(4)}}{2(9)} = \frac{12 \pm \sqrt{144 - 144}}{2(9)} = \frac{12}{18} = \boxed{\frac{2}{3}}$$

(4) Solve the equation  $9x^2 - 12x + 3 = 0$  by using the quadratic formula.

$$X = \frac{-(-12) \pm \sqrt{(-12)^2 - 4(9)(3)}}{2(9)} = \frac{12 \pm \sqrt{144 - 168}}{18}$$
$$= \frac{12 \pm \sqrt{36}}{18} = \frac{12 \pm 6}{18}$$

$$X = \frac{12+6}{18} = \boxed{ }$$
 or  $X = \frac{12-6}{18} = \frac{6}{18} = \frac{1}{3}$