

$$10/10 = 100$$

Key

Support for College Algebra
Spring 2017
Quiz #2

SHOW ALL WORK QUIZ!

Solve the following two equations using *Completing the Square* (do not use the Quadratic Formula!). Recall, a "check" is worth an additional point.

1. $x(x - 6) = 3$

$$x^2 - 6x + \frac{9}{9} = 3 + \frac{9}{9}$$

$$(x - 3)^2 = 12$$

$$x - 3 = \pm \sqrt{12}$$
$$= \pm 2\sqrt{3}$$

$$x = 3 \pm 2\sqrt{3}$$

2. $5c(c - 2) = 6 + 3c$

$$5c^2 - 10c = 6 + 3c$$

$$5c^2 - 13c = 6$$

$$c^2 - \frac{13}{5}c + \frac{169}{100} = \frac{6}{5} + \frac{169}{100}$$

$$\left(c - \frac{13}{10}\right)^2 = \frac{120 + 169}{100}$$

$$\left(c - \frac{13}{10}\right)^2 = \frac{289}{100}$$

$$c - \frac{13}{10} = \pm \frac{\sqrt{289}}{\sqrt{100}}$$

$$= \pm \frac{17}{10}$$

$$c = \frac{13}{10} \pm \frac{17}{10}$$

$$c = \frac{13 \pm 17}{10}$$

$$c = 3$$

&

$$c = -\frac{2}{5}$$