

Foundations for College Algebra
Spring 2016
Quiz #5

Name: Key Date: February 17, 2016

Show all work!

1. Given the equation: $\frac{5}{2}x - 1 = x + \frac{1}{4}$, show using proper *Order of Operations* that $x = \frac{5}{6}$ is a solution.

$$\begin{aligned} \frac{5}{2} \cdot \frac{5}{6} - 1 &= \frac{5}{6} + \frac{1}{4} \\ \frac{25}{12} - \frac{1}{1} &= \frac{20+3}{12} \\ \frac{25-12}{12} &= \frac{23}{12} \\ \frac{13}{12} &= \frac{23}{12} \checkmark \end{aligned}$$

2. Solve $-5(1 - 5x) + 5(-8x - 2) = -4x - 8x$ by stating the "correct" Algebra Power Tool for each line.

② $-5 + 25x - 40x - 10 = -4x - 8x$ *Dist.*

③ $-15x - 15 = -12x$ *Assoc/Comm*

④ $-3x = 15$ *A. I.*

⑤ $\boxed{x = -5}$ *Inv. I.*

3. What Tool guarantees the result will be a "one"?

Multiplicative Inverse

$$a \cdot \frac{1}{a} = \frac{a}{a} = 1$$