

Support for College Algebra
Fall 2016
Quiz #3

Show ALL work on the quiz – do not use decimal representations for fractions.

Simplify the following fractions.

$$1. \frac{\frac{2}{5} - \frac{3}{x}}{\frac{2}{5x^2}} = \frac{\frac{2x - 15}{5x}}{\frac{2}{5x^2}} = \frac{2x - 15}{5x} \cdot \frac{5x^2}{2}$$

$$= \frac{x(2x - 15)}{2}$$

or

$$= \frac{2x^2 - 15x}{2}$$

2. $\frac{1}{3} + \frac{1}{3} \cdot 6 + 3 \div \frac{1}{2} - \frac{1}{3}$ *Note: Use Order of Operations and Operations on fractions to simplify correctly.*

$$\frac{1}{3} + \frac{1}{3} \cdot 6 + 3 \div \frac{1}{2} - \frac{1}{3}$$

$$\frac{1}{3} + 2 + 3 \div \frac{1}{2} - \frac{1}{3}$$

$$\frac{1}{3} + 2 + 6 - \frac{1}{3}$$

$$\frac{7}{3} + 6 - \frac{1}{3}$$

$$\frac{25}{3} - \frac{1}{3}$$

$$\frac{24}{3}$$

$$8$$