

Fractions

1. Perform the following and simplify:

$$\frac{6x}{3x+1} \cdot \frac{x-3}{x}$$

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

$$\frac{\frac{4}{(x-5)^2}}{\frac{x}{x-5}}$$

$$\frac{5x}{2x-3} + \frac{2}{x+1}$$

$$\frac{x-2}{x} + \frac{x}{x+1}$$

$$\frac{4}{(x+1)^2} - \frac{x}{x+1}$$

2. A 100-gallon mixture of citrus extract and water is 3% citrus extract.

- Write a rational expression in x whose values give the percentage (in decimal form) of the mixture that is citrus extract when x gallons of water are added to the mixture.
- Find the percentage of citrus extract in the mixture if 50 gallons of water are added to it.