

Accuplacer Study Modules

TOPIC: Simplifying Algebraic Expressions with Fractions

Instructions: Simplify each expression

<p>1. $2x - \frac{5x}{3}$</p> <p>$\frac{3}{3} \cdot \frac{2x}{1} - \frac{5x}{3}$ (Get common denominator)</p> <p>$\frac{6x}{3} - \frac{5x}{3}$ (Subtract numerators)</p> <p>$\frac{6x-5x}{3}$ (combine like terms)</p> <p>$\frac{1x}{3}$ or $\frac{x}{3}$ solution</p>	<p>2. $\frac{2x}{3} + \frac{3x}{4}$</p> <p>$\frac{4}{4} \cdot \frac{2x}{3} + \frac{3}{3} \cdot \frac{3x}{4}$ (Get common denominator)</p> <p>$\frac{8x}{12} + \frac{9x}{12}$ (Add numerators)</p> <p>$\frac{8x+9x}{12}$ (combine like terms)</p> <p>$\frac{17x}{12}$ solution</p>
<p>3. $\frac{1}{3}(x+12) + 2x$</p> <p>$\frac{1x}{3} + \frac{12}{3} + 2x$ (Distribute)</p> <p>$\frac{1x}{3} + \frac{12}{3} + \frac{3}{3} \cdot \frac{2x}{1}$ (Get common denominator)</p> <p>$\frac{1x}{3} + \frac{12}{3} + \frac{6x}{3}$ (Add numerators)</p> <p>$\frac{1x+12+6x}{3}$ (combine like terms)</p> <p>$\frac{7x+12}{3}$ solution</p> <p>or</p> <p>$\frac{7x}{3} + 4$ Alternate form of solution</p>	<p>4. $\frac{2}{5}(x-3) - \frac{x}{2}$</p> <p>$\frac{2x}{5} - \frac{6}{5} - \frac{x}{2}$ (Distribute)</p> <p>$\frac{2}{2} \cdot \frac{2x}{5} - \frac{2}{2} \cdot \frac{6}{5} - \frac{5}{5} \cdot \frac{x}{2}$ (Get common denominators)</p> <p>$\frac{4x}{10} - \frac{12}{10} - \frac{5x}{10}$ (Subtract numerators)</p> <p>$\frac{4x-12-5x}{10}$ (combine like terms)</p> <p>$\frac{-1x-12}{10}$ or $\frac{-x-12}{10}$</p>