

Pratice Quiz

Simplify each and state the excluded values.

$$1) \frac{14r - 42}{49r - 21} \rightarrow \frac{\cancel{14}(r-3)}{7(7r-3)} \quad \text{Excluded values: } \left\{ \frac{2(r-3)}{7r-3}; \frac{3}{7} \right\}$$

Simplify each expression.

$$2) \frac{n+6}{n^2+7n+6} \cdot \frac{n^2-49}{n^2+2n-35} \rightarrow \frac{\cancel{n+6}}{(\cancel{n+6})(n+1)} \cdot \frac{(\cancel{n+7})(n-7)}{(\cancel{n+7})(n-5)} = \frac{n-7}{(n+1)(n-5)}$$

$$3) \frac{10}{k^2-6k+8} \div \frac{2k+6}{k^2-k-12} \rightarrow \frac{10^5}{(k-2)(\cancel{k-4})} \cdot \frac{(\cancel{k-4})(\cancel{k+3})}{2(k+3)} = \frac{5}{k-2}$$

$$4) \frac{6x}{2x} + \frac{x+y}{6x} \rightarrow \frac{18x + x + y}{6x} = \frac{19x + y}{6x}$$

$$\frac{4}{5} \frac{3u}{u^6} - \frac{2v}{3u} \frac{2}{2} = \frac{3u^2 - 4v}{6u}$$

$$\frac{a-3}{a-3} \frac{5}{a-2} + \frac{4}{a-3} = \frac{9a-23}{(a-3)(a-2)}$$

$$\frac{a-2}{a-2}$$

$$\frac{5(a-3) + 4(a-2)}{(a-3)(a-2)}$$

$$\frac{9a-23}{(a-3)(a-2)}$$

$$\frac{5a-15+4a-8}{LCD}$$

$$\frac{2}{2} \frac{2}{n-2} + \frac{6}{2} \frac{n-2}{n-2} = \frac{3n-4}{n-2}$$

$$\frac{4+6(n-2)}{2(n-2)}$$

$$\frac{4+6n-12}{2(n-2)}$$

$$\frac{6n-8}{2(n-2)} = \frac{2(3n-4)}{2(n-2)}$$

$$\frac{5x-4}{5x-4} \frac{3}{2x+1} - \frac{4}{5x-4} \frac{(2x+1)}{2x+1} = \frac{7x-16}{(5x-4)(2x+1)}$$

$$\frac{3(5x-4) - 4(2x+1)}{(2x+1)(5x-4)} = \frac{15x-12-8x-4}{LCD}$$

$$\frac{7x-16}{(2x+1)(5x-4)}$$