

04-05 Sample Quiz - Add & Subtract Rational Expressions**Multiple Choice**

Identify the choice that best completes the statement or answers the question.

_____ 1. Add and simplify the rational expression:

$$\frac{5a}{3a^2} + \frac{6}{3a^2} + \frac{4a}{3a^2}$$

a. $\frac{9a+6}{9a^2}$

b. $\frac{3a+2}{3a^2}$

c. $\frac{3a+2}{a^2}$

d. $\frac{5}{a}$

_____ 2. Add and simplify the rational expression:

$$\frac{a^2}{a+2} + \frac{2a+4}{a+2}$$

a. $\frac{a^2+2a+4}{a+2}$

b. $a+2$; $a \neq -2$

c. $\frac{a^2+2a+4}{a+4}$

d. $a-2$; $a \neq -2$

_____ 3. Add and simplify the rational expression:

$$\frac{x^2}{x+1} + \frac{6x+5}{x+1}$$

a. $\frac{x^2+6x+5}{x^2+2x+1}$; $x \neq -1$

b. $x+5$; $x \neq -1$

c. $\frac{6x^3+5x^2}{x^2+2x+1}$; $x \neq -1$

d. $\frac{x+5}{x+1}$; $x \neq -1$

_____ 4. Subtract and simplify:

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

a. 0

b. 1

c. $\frac{x^2+x}{x^2-1}$

d. $\frac{-x^2}{x^2-1}$

_____ 5. Add and simplify:

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

a. $\frac{5x-5}{x^2-x-6}$

c. $\frac{5}{x-1}$

b. $\frac{2x-1}{x^2-x-6}$

d. $\frac{1-2x}{(x-3)(x+2)}$

_____ 6. What is the **Lowest** Common Denominator for the two following rational expressions?

$$\frac{x}{x^2+3x-10}, \frac{5}{x^2-25}$$

a. $(x^2+3x-10)(x^2-25)$

c. $(x-5)(x+5)(x+2)$

b. $(x-5)(x+5)(x-2)$

d. $5x$