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Algebra II

## *Complex Fractions*

1. The expression  $1 - \frac{x}{\frac{x-y}{1}}$  is equivalent to

- (1)  $1-x$                       (3)  $y$   
(2)  $x-y$                       (4)  $-y$

2. Which expression is equivalent to the complex fraction  $\frac{\frac{1}{a}-a}{\frac{1}{a}+1}$ ?

- (1)  $+1$                       (3)  $1-a$   
(2)  $-1$                       (4)  $-(1-a)$

3. The expression  $\frac{\frac{1}{3}-\frac{1}{x}}{\frac{3}{x}-1}$  is equivalent to

- (1)  $\frac{1}{3}$                       (3)  $3$   
(2)  $-\frac{1}{3}$                       (4)  $-3$

4. The expression  $\frac{\frac{1}{3}+\frac{1}{3x}}{\frac{1}{x}+\frac{1}{3}}$  is equivalent to

- (1)  $\frac{x+1}{x+3}$                       (3)  $\frac{3x+3}{x+3}$   
(2)  $2$                       (4)  $\frac{1}{3}$

5. Written in simplest form, the expression  $\frac{\frac{x}{4} - \frac{1}{x}}{\frac{1}{2x} + \frac{1}{4}}$  is equivalent to

(1)  $x - 1$

(3)  $\frac{x-2}{2}$

(2)  $x - 2$

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

6. Simplify:  $\frac{\frac{x-3}{x-3}}{\frac{x}{x-3}}$

7. Express in simplest form:  $\frac{x - \frac{4}{x}}{\frac{2+x}{x}}$

8. Express in simplest form:  $\frac{\frac{1}{2} - \frac{4}{d}}{\frac{1}{d} + \frac{3}{2d}}$