Multiply by the LCD

Name Schlansky
Mr. Schlansky

Date _____
Algebra II

Complex Fractions

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

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

Fl: x-y
LCD: x-y

$\dfrac{x-y-x}{1} = -y$

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

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

Fl: a
LCD: a

DOTS

$\dfrac{1-a^2}{1+a}$ $\dfrac{(1+a)(1-a)}{1+a} = 1-a$

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

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

Fl: 3
Fl: x
LCD: 3x

$\dfrac{x-3}{9-3x}$ $\dfrac{x-3(-1)}{3(3-x)} = \dfrac{-1}{3}$

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

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

Fl: 3
Fl: x
LCD: 3x

$\dfrac{x+1}{3+x}$

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

(1) $x-1$ (3) $\dfrac{x-2}{2}$

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

$4x$ $2+x$ F1: 4 F2: x LCD: 4x

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

6. Simplify: $\dfrac{\left(\frac{x}{3}\right)-\left(\frac{3}{x}\right)}{\left(\frac{x-3}{x}\right)}$

$3x$ $3x$ F1: 3 F2: x LCD: 3x

$\dfrac{x^2-9}{3(x-3)}$ $\dfrac{(x+3)(x-3)}{3(x-3)}=\dfrac{x+3}{3}$

7. Express in simplest form: $\dfrac{\left(x\right)-\left(\frac{4}{x}\right)}{\left(\frac{2+x}{x}\right)}$

x x LCD: x

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

8. Express in simplest form: $\dfrac{\left(\frac{1}{2}\right)-\left(\frac{4}{d}\right)}{\left(\frac{1}{d}\right)+\left(\frac{3}{2d}\right)}$

$2d$ $2d$ $2d$ F1: 2 F2: d LCD: 2d

$\dfrac{d-8}{2+3}$ $\dfrac{d-8}{5}$