Practice 14.4c_14.5

Name_____

(14.4c) Simplify.

1) $\frac{6}{1 - y} - \frac{5}{y - 1}$

2) $\frac{11xy}{x^2 - y^2} - \frac{x - y}{x + y}$

3) $\frac{4x}{x^2 - 5x + 6} - \frac{16}{x^2 - 6x + 8}$

4) $\frac{b}{b^2 - 25} + \frac{5}{b + 5} - \frac{6}{b}$

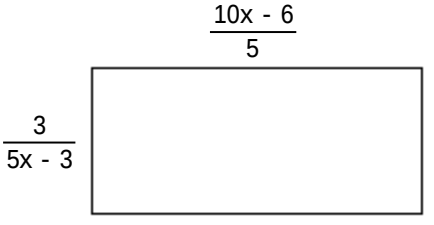
5) $\frac{-64x}{5(8x + 1)} + \frac{1}{5x(8x + 1)} - \frac{5}{x}$

6) $\frac{2x + 9}{x + 1} + \frac{x + 2}{x + 4} - \frac{5x + 26}{(x + 1)(x + 4)}$

Solve the problem.

7) The joint conductance, C, of three resistances R_1, R_2, and R_3 in parallel is expressed by: $C = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$. Add and simplify the formula for C.

8) Find the the area of the rectangle shown in the figure. Write your answer in factored form.



(14.5) Simplify.

9) $\dfrac{\frac{4}{3}}{\frac{1}{6}}$

10) $\dfrac{\frac{2}{x}}{\frac{r}{z}}$

11) $\dfrac{\frac{x^8}{7y^7}}{\frac{x^2}{y^4}}$

12) $\dfrac{\frac{1}{k+2}}{\frac{5}{k^2-4}}$

13) $\dfrac{4+\frac{2}{x}}{\frac{x}{3}+\frac{1}{6}}$

14) $\dfrac{\frac{2}{x}+\frac{3}{y}}{\frac{3}{x}-\frac{2}{y}}$

15) $\dfrac{x^{-4}+y^{-4}}{x^{-1}+y^{-1}}$

Answer Key
Testname: WKS_14.4_C_14.5

1) $\frac{11}{1 - y}$

2) $\frac{-x^2 + 13xy - y^2}{(x + y)(x - y)}$

3) $\frac{4(x - 6)}{(x - 3)(x - 4)}$

4) $\frac{-25(b - 6)}{b(b + 5)(b - 5)}$

5) $-\frac{8(x + 3)}{5x}$

6) 3

7) $\frac{R_2R_3 + R_1R_3 + R_1R_2}{R_1R_2R_3}$

8) $\frac{6}{5}$

9) 8

10) $\frac{2z}{xr}$

11) $\frac{x^6}{7y^3}$

12) $\frac{k - 2}{5}$

13) $\frac{12}{x}$

14) $\frac{2y + 3x}{3y - 2x}$

15) $\frac{y^4 + x^4}{x^3y^4 + x^4y^3}$