Practice 14.4 a, b, & c

Name_____

Find the least common multiple.

1) t, t + 8

2) x^2 - 36, x + 6

3) m^2 - 2m, m^2 - 5m + 6

Rewrite the rational expression using the specified denominator D.

4) $\dfrac{4y}{y^2 - 9}$, D = (y - 3)(y + 3)(y + 11)

Simplify.

5) $\dfrac{5}{7} - \dfrac{1}{2}$

6) $\dfrac{4}{5} - \dfrac{3}{20}$

7) $\dfrac{1}{10} + \dfrac{3}{7}$

8) $\dfrac{12}{x} + \dfrac{7}{4x}$

9) $\dfrac{5}{r} + \dfrac{7}{r - 8}$

10) $\dfrac{4}{x - 2} + \dfrac{9}{2 - x}$

11) $\dfrac{3}{y^2 - 3y + 2} + \dfrac{5}{y^2 - 1}$

12) $\dfrac{2}{15x} - \dfrac{4}{21x^2}$

13) $\dfrac{6}{1 - y} - \dfrac{5}{y - 1}$

1

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

15) $\dfrac{4x}{x^2 - 5x + 6} - \dfrac{16}{x^2 - 6x + 8}$

16) $\dfrac{b}{b^2 - 25} + \dfrac{5}{b + 5} - \dfrac{6}{b}$

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

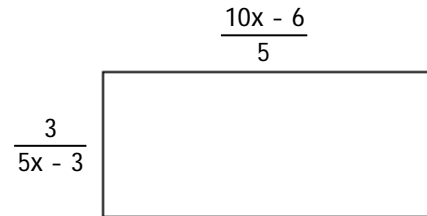18) $\dfrac{2x + 9}{x + 1} + \dfrac{x + 2}{x + 4} - \dfrac{5x + 26}{(x + 1)(x + 4)}$

Solve the problem.

19) The joint conductance, C, of three resistances R_1, R_2, and R_3 in parallel is expressed by:

$C = \dfrac{1}{R_1} + \dfrac{1}{R_2} + \dfrac{1}{R_3}$. Add and simplify the formula for C.

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

$\dfrac{10x - 6}{5}$

$\dfrac{3}{5x - 3}$

2

1) $t(t + 8)$

2) $x^2 - 36$

3) $m(m - 2)(m - 3)$

4) $\dfrac{4y(y + 11)}{(y - 3)(y + 3)(y + 11)}$

5) $\dfrac{3}{14}$

6) $\dfrac{13}{20}$

7) $\dfrac{37}{70}$

8) $\dfrac{55}{4x}$

9) $\dfrac{12r - 40}{r(r - 8)}$

10) $\dfrac{-5}{x - 2}$

11) $\dfrac{8y - 7}{(y - 1)(y + 1)(y - 2)}$

12) $\dfrac{2(7x - 10)}{105x^2}$

13) $\dfrac{11}{1 - y}$

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

15) $\dfrac{4(x - 6)}{(x - 3)(x - 4)}$

16) $\dfrac{-25(b - 6)}{b(b + 5)(b - 5)}$

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

18) 3

19) $\dfrac{R_2R_3 + R_1R_3 + R_1R_2}{R_1R_2R_3}$

20) $\dfrac{6}{5}$