

EXERCISE A

Simplify each expression. Don't forget, "when in doubt..."

1) $\frac{6}{ab} + \frac{8}{a}$

2) $\frac{5}{6v} + \frac{7}{4v}$

3) $\frac{3x}{4y^2} - \frac{y}{6x}$

4) $\frac{5}{a^2b} - \frac{7a}{5a^2}$

5) $\frac{7}{y-8} - \frac{6}{8-y}$

6) $\frac{a}{a-4} - \frac{3}{4-a}$

7) $\frac{m}{m^2-4} + \frac{2}{3m+6}$

8) $\frac{y}{y+3} - \frac{6y}{y^2-9}$

9) $\frac{5}{x^2-3x-28} + \frac{7}{2x-14}$

10) $\frac{d-4}{d^2+2d-8} - \frac{d+2}{d^2-16}$

EXERCISE B

Simplify each expression.

11) $\frac{5}{r} + 7$

12) $\frac{2x}{3y} + 5$

13) $\frac{3}{4q} - \frac{2}{5q} - \frac{1}{2q}$

14) $\frac{11}{9} - \frac{7}{2w} - \frac{6}{5w}$

15) $\frac{1}{h^2-9h+20} - \frac{5}{h^2-10h+25}$

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

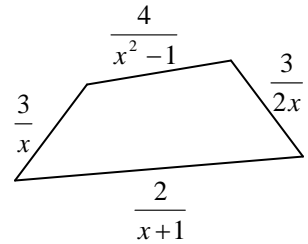
17) $\frac{m^2+n^2}{m^2-n^2} + \frac{m}{n-m} + \frac{n}{m+n}$

18) $\frac{y+1}{y-1} + \frac{y+2}{y-2} + \frac{y}{y^2-3y+2}$

EXERCISE C

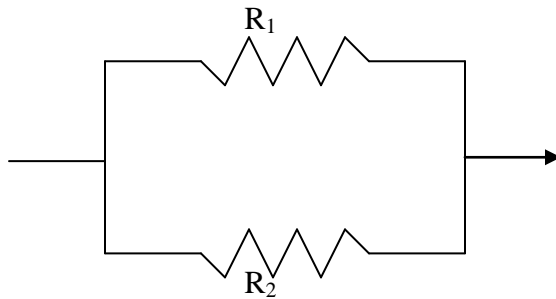
19)
$$\frac{\frac{1}{b+2} + \frac{1}{b-5}}{\frac{2b^2 - b - 3}{b^2 - 3b - 10}}$$

20) Find the perimeter of the quadrilateral in simplest form.



In an electrical circuit, if two resistors with resistance R_1 and R_2 are connected in parallel as shown, the relationship between these resistances and the resulting combination resistance R is:

$$\frac{1}{R} = \frac{1}{R_1} + \frac{1}{R_2}$$



21) If R_1 is x ohms and R_2 is 4 ohms less than twice x ohms, write an expression for $\frac{1}{R}$.

ANSWERS:

1) $\frac{6+8b}{ab}$

7) $\frac{5m-4}{3(m+2)(m-2)}$

13) $-\frac{3}{20q}$

19) $\frac{1}{b+1}$

3) $\frac{9x^2 - 2y^3}{12xy^2}$

9) $\frac{7x+38}{2(x-7)(x+4)}$

15) $\frac{-4h+15}{(h-4)(h-5)^2}$

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

5) $\frac{13}{y-8}$ or $\frac{-13}{8-y}$

11) $\frac{5+7r}{r}$

17) 0