Show that

$$\frac{(a+b)^2+(a-b)^2}{2} = a^2+b^2$$

10

Show that the equation

$$\frac{5}{x+2} = \frac{4-3x}{x-1}$$

can be rearranged to give $3x^2 + 7x - 13 = 0$

5

Solve $\frac{3}{x} + \frac{3}{2x} = 2$

19

Solve the equation

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

7

Show that $25 - \frac{(x-8)^2}{4} = \frac{(2+x)(18-x)}{4}$

25

Solve $\frac{4}{x+3} + \frac{3}{2x-1} = 1$

9

Solve the equation

$$\frac{7}{x+2} + \frac{1}{x-1} = 4$$

11

Simplify fully $\frac{x^2-8x+15}{2x^2-7x-15}$

3

Simplify fully $\frac{x^2+x-6}{x^2-7x+10}$

8

Simplify $\frac{x-3}{x^2-9}$

14

Simplify fully $\frac{x^2+5x+6}{x^2+2x}$

18

Simplify fully

$$\frac{x^2-3x}{x^2-8x+15}$$

26

Simplify fully $\frac{25-x^2}{25+5x}$

21

1 Rearrange the formula to make t the subject.

$$y = \frac{2pt}{p - t}$$

2 Make s the subject of the formula

$$v^2 = u^2 + 2as$$

4 Make b the subject of the formula $a = \frac{2 - 7b}{b - 5}$

6 Make q the subject of the formula $5(q + p) = 4 + 8p$
Give your answer in its simplest form.

12 Make q the subject of the formula

$$x = \frac{p - q}{pq}$$

13 Rearrange $\frac{1}{u} + \frac{1}{v} = \frac{1}{f}$

to make u the subject of the formula.

15 Make h the subject of the formula $d = \sqrt{\frac{3h}{2}}$

16 Rearrange the formula to make a the subject.

$$P = \frac{n^2 + a}{n + a}$$

17 $\frac{x}{x + c} = \frac{p}{q}$

Make x the subject of the formula.

20 Make p the subject of the formula

$$4(p - 2q) = 3p + 2$$

22 Make x the subject of

$$5(x - 3) = y(4 - 3x)$$

23 Rearrange $a(q - c) = d$ to make q the subject.

24 Make r the subject of the formula

$$P = \pi r + 2r + 2a$$