1 Solve each of the following equations for x.

a $5 - 2x = 6x + 3$

b $\frac{5x}{4} - 8 = 12$

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

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

2 Solve each of the following pairs of simultaneous equations.

a $5x + 3y = 15$

$x - y = 6$

b $\frac{x}{3} + \frac{y}{5} = 1$

$3x + 5y = 15$

3 Solve each of the following equations for x.

a $\frac{x}{a} + \frac{x}{b} = 1$

b $\frac{ab}{xc} = \frac{a+b}{x+c}$

4 Solve the following pair of simultaneous equations for x and y.

$\frac{x}{a} + \frac{y}{b} = 1$ and $\frac{x}{b} + \frac{y}{a} = 1$

5 Rearrange the formula $U = \frac{V-W+1}{V+W-1}$ to make V the subject.

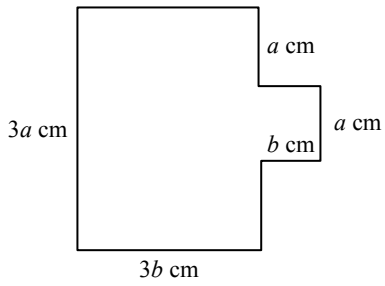
6 Simplify:

a $\frac{a+b}{a^2ab} - \frac{a+2b}{a^2b^2}$

b $x - \frac{x^2}{xy}$

7 The fuel tank in a car was 40% full. I added 28 litres and then found it was 75% full. How much fuel does the tank hold?

8



a For the shape shown above find, in terms of a and b,

i the perimeter

ii the area.

b If the perimeter of the shape is $2P$, express the area in terms of a and P.