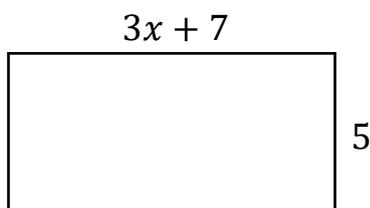




## Forming and Solving Equations Exam Practice

- Q1. a) Find an expression for the perimeter of the shape below, in terms of  $x$ , simplifying your answer fully.

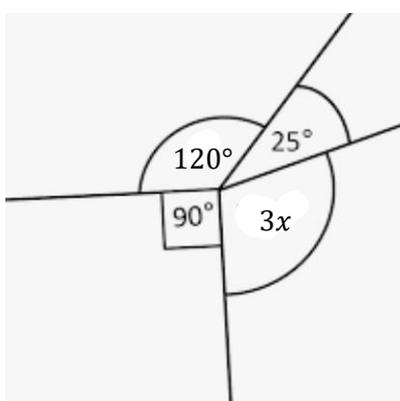


(2 marks)

- b) Given that the perimeter of the shape is 79 cm, find  $x$ .

(2 marks)

- Q2. By forming and solving a suitable equation, find the value of  $x$ .



(3 marks)

- Q3. Jim buys  $p$  folders, Bill buys twice as many folders as Jim, and Peter buys 4 more folders than Bill.

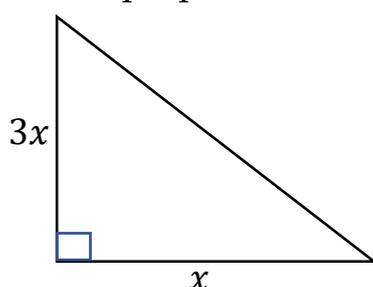
- a) Work out an expression for how many folders they have bought altogether.

(2 marks)

- b) You are given that they buy a total of 34 folders. Work out how many folders they bought each.

(2 marks)

- Q4. The area of the right-angled triangle below is  $192 \text{ cm}^2$ . Find the lengths of the two perpendicular sides.

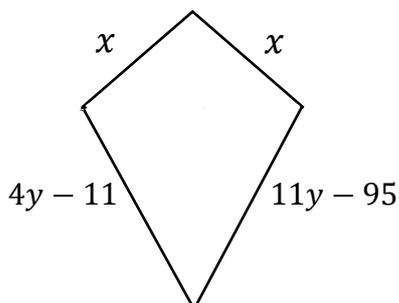


(3 marks)



- Q5. The diagram below shows a kite. The perimeter of the kite is 92 cm.  
Find the length of each side.

(4 marks)

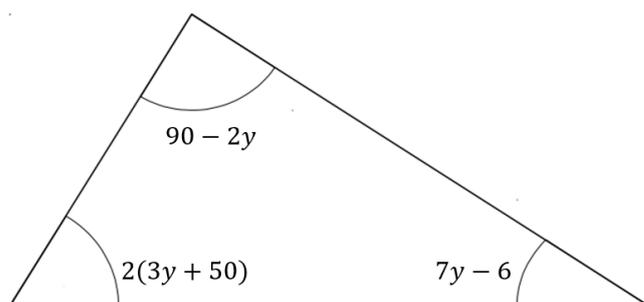


- Q6. In 5 years' time, Tony will three times as old as he was 3 years ago.  
How old is he now?

(3 marks)

- Q7. In the triangle below, all the angles are marked in degrees. Find the size of each of the three angles.

(4 marks)



- Q8. Jo buys  $x$  cans of paint at the warehouse. Each one costs 80p and he will sell them for £4.30 each in his shop. The running costs of the shop each day are £25.

- (i) Let  $P$  be Jo's daily profit in pounds. Find an equation for  $P$  in terms of  $x$ .

(2 marks)

- (ii) Find the number of cans he needs to make a profit of £115.

(2 marks)

- Q9. The ratio of the perimeter of a square to the perimeter of an equilateral triangle is 1 : 2. If the square has side length  $2x - 5$  and the triangle has side length 16, find the perimeter of the square.

(4 marks)