Answer ALL TWELVE questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.
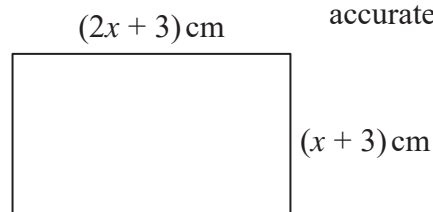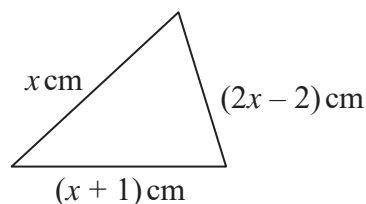
1

Diagram **NOT** accurately drawn

x cm

$(2x - 2)$ cm

$(x + 1)$ cm

$(2x + 3)$ cm

$(x + 3)$ cm

Figure 1

Figure 1 shows a triangle and a rectangle.

The triangle has sides of length x cm, $(2x - 2)$ cm and $(x + 1)$ cm.
The rectangle has length $(2x + 3)$ cm and width $(x + 3)$ cm.

The perimeter of the rectangle is 3 times the perimeter of the triangle.

(a) Write down an equation in x to represent the given information.

(2)

(b) Solve your equation to find the value of x.
Show clear algebraic working.

(3)

P 5 9 0 1 5 A 0 2 3 2

Question 1 continued

(Total for Question 1 is 5 marks)