

11

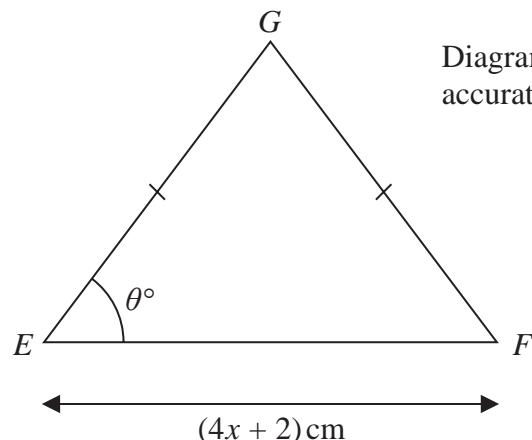
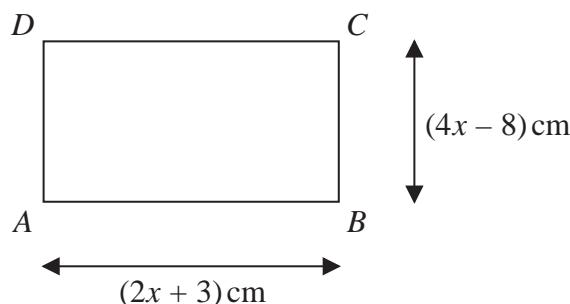


Diagram NOT  
accurately drawn

**Figure 4**

Figure 4 shows a rectangle  $ABCD$  and an isosceles triangle  $EFG$  with  $EG = FG$

$$AB = (2x + 3) \text{ cm} \quad BC = (4x - 8) \text{ cm} \quad EF = (4x + 2) \text{ cm}$$

$$\angle FEG = \theta^\circ \text{ where } \tan \theta^\circ = \frac{1}{2}$$

The perimeter of the rectangle is  $P$  cm and the area of the triangle is  $T$  cm<sup>2</sup>

Given that  $P \geq T$

find the range of possible values of  $x$

Show your working clearly.

(8)



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**Question 11 continued**

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P 6 9 3 1 0 A 0 3 1 3 2

**Question 11 continued**

**(Total for Question 11 is 8 marks)**

**TOTAL FOR PAPER IS 100 MARKS**

