11

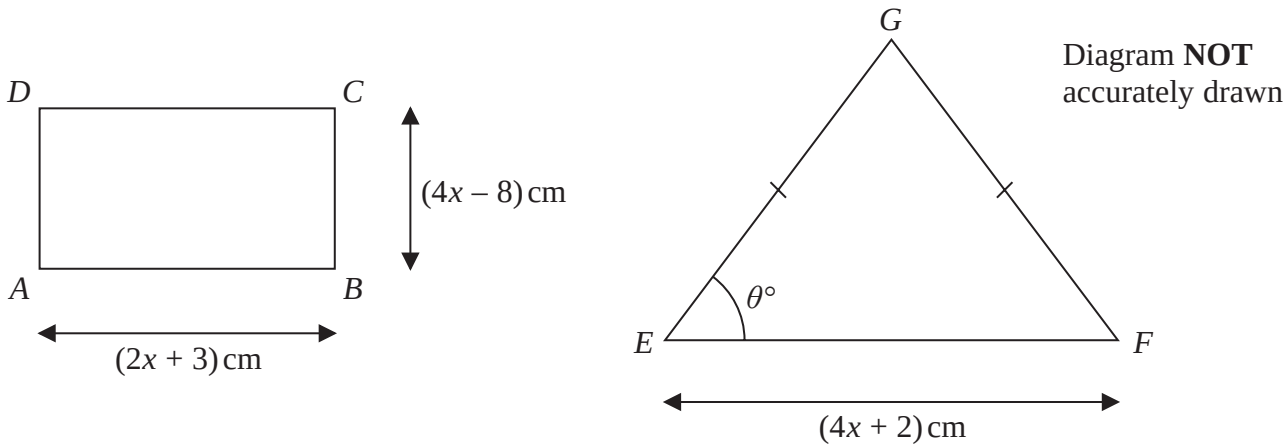

Figure 4

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

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

$\angle FEG = \theta°$ where $\tan\theta° = \frac{1}{2}$

The perimeter of the rectangle is P cm and the area of the triangle is $T\,\text{cm}^2$

Given that $P \geqslant T$

find the range of possible values of x
Show your working clearly.

(8)

Question 11 continued

Question 11 continued

(Total for Question 11 is 8 marks)

TOTAL FOR PAPER IS 100 MARKS