12

Diagram **NOT** accurately drawn

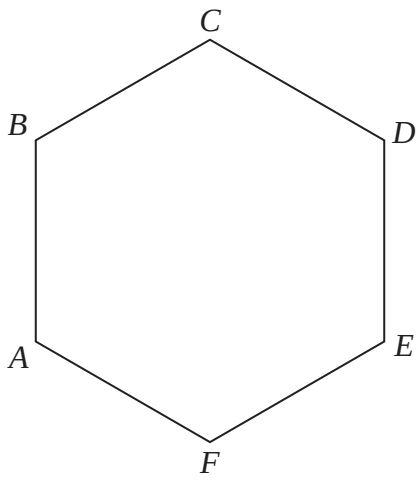

Figure 4

Figure 4 shows a regular hexagon *ABCDEF*

Given that the area of hexagon *ABCDEF* = $150\sqrt{3}$ cm^2

(a) find the perimeter, in cm, of the hexagon.

(4)

Diagram **NOT** accurately drawn

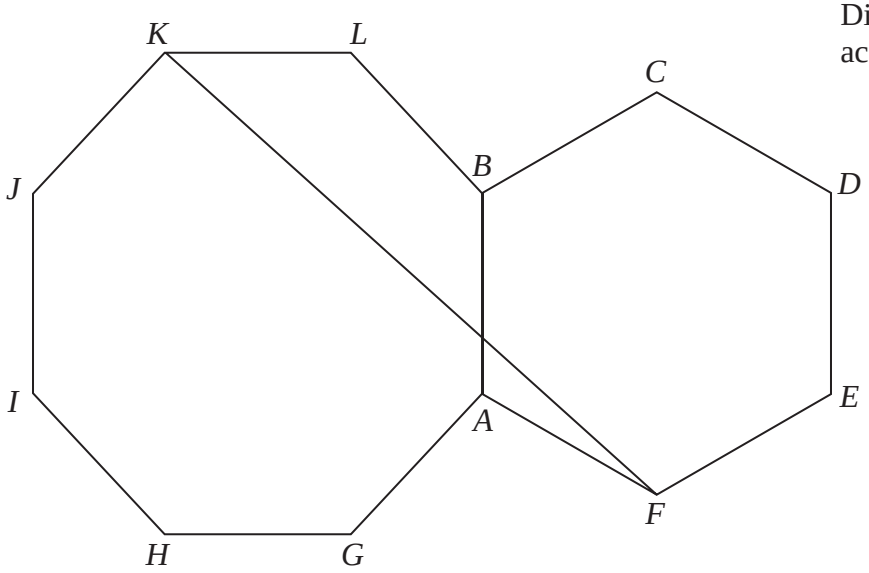

Figure 5

Figure 5 shows a shape *AGHIJKLBCDEF* made from a regular octagon *GHIJKLBA* and the regular hexagon *ABCDEF* from part (a).

(b) Work out the length, in cm to one decimal place, of the straight line *KF*

(6)

$$\left[\begin{array}{c}\text{Area of triangle} = \frac{1}{2}ab\sin C \\ \text{Sum of interior angles of polygon is } (2n-4) \text{ right angles}\end{array}\right]$$

Question 12 continued

Question 12 continued

(Total for Question 12 is 10 marks)

TOTAL FOR PAPER IS 100 MARKS