7

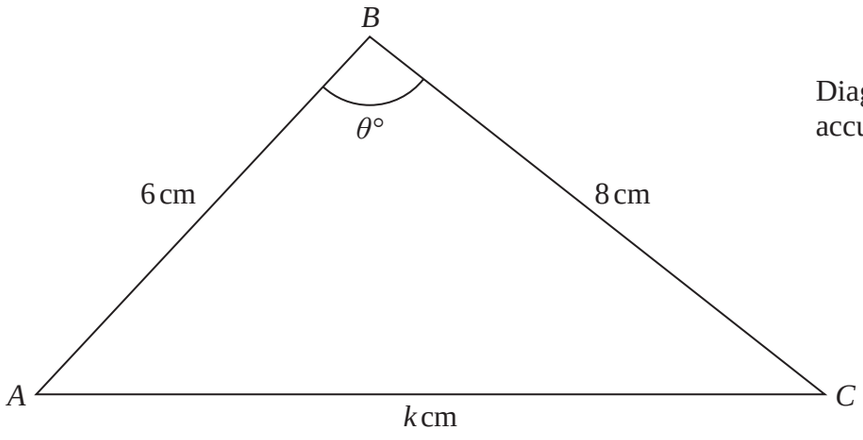

Diagram **NOT** accurately drawn

Figure 2

Figure 2 shows triangle ABC

$$AB = 6\,\text{cm} \quad BC = 8\,\text{cm} \quad AC = k\,\text{cm} \quad \angle ABC = \theta°$$

(a) Show that $\cos\theta° = \dfrac{100 - k^2}{96}$

(2)

The area of triangle ABC is $\sqrt{455}$ cm^2

(b) Find the two possible values of k

(7)

Question 7 continued

Question 7 continued

Question 7 continued

(Total for Question 7 is 9 marks)