

4.

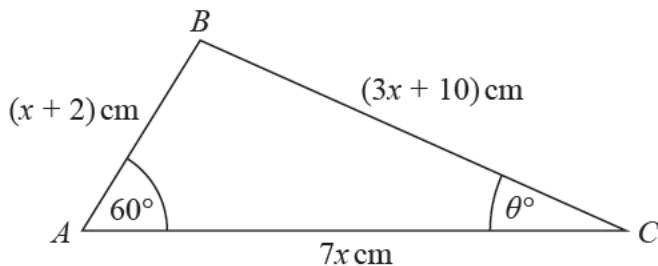


Figure 1

Figure 1 shows a sketch of triangle ABC with $AB = (x + 2)$ cm, $BC = (3x + 10)$ cm, $AC = 7x$ cm, angle $BAC = 60^\circ$ and angle $ACB = \theta^\circ$

(a) (i) Show that $17x^2 - 35x - 48 = 0$

(3)

(ii) Hence find the value of x .

(1)

(b) Hence find the value of θ giving your answer to one decimal place.

(2)