

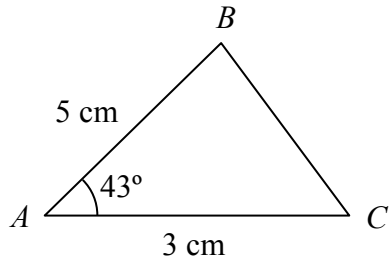


## COSINE RULE

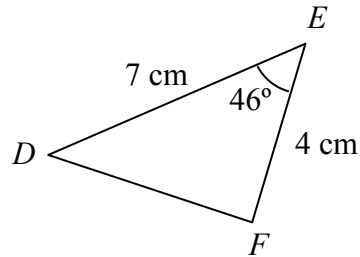
### EXAM-TYPE QUESTIONS

Ref: G455. **2R6**

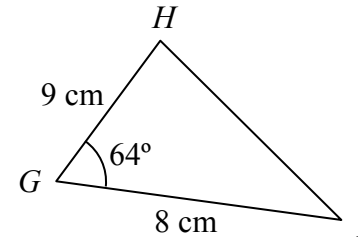
**A1** Find the length of  $BC$



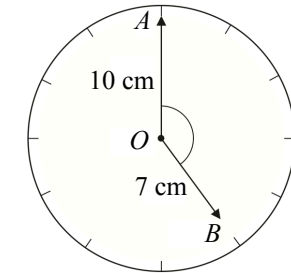
**A2** Find the length of  $DF$



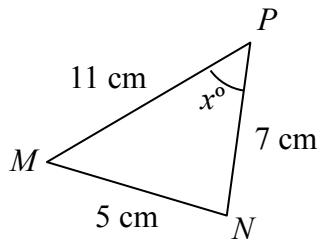
**A3** Find the length of  $HI$



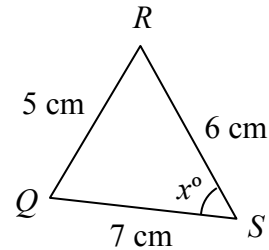
**A4** Find the distance  $AB$



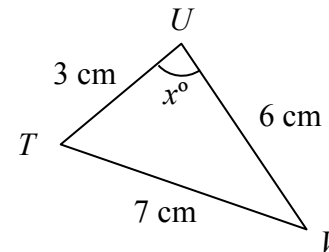
**B1** Find angle  $MPN$



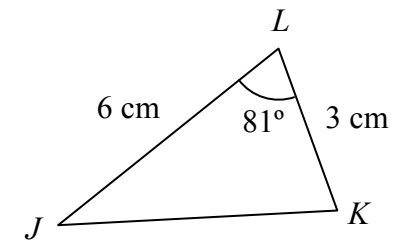
**B2** Find angle  $QSR$



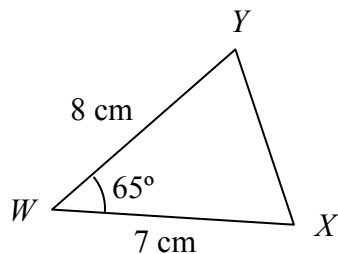
**B3** Find angle  $TUV$



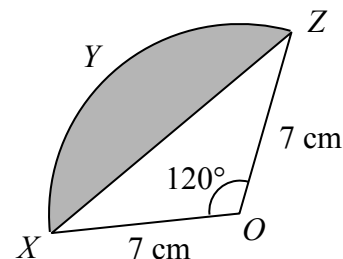
**B4** Find angle  $JKL$



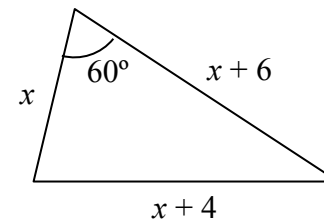
**C1** Find angle  $XYW$



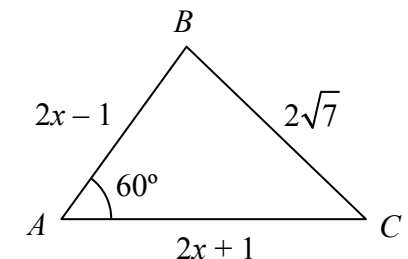
**C2** Find the perimeter of  $XYZ$



**C3** Find  $x$



**C4** Find  $x$



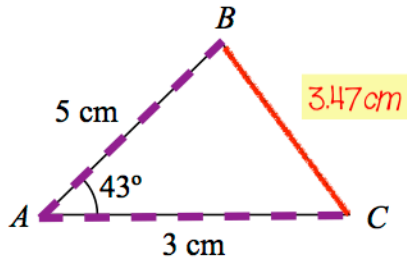


## COSINE RULE

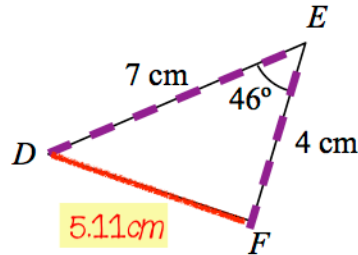
### EXAM-TYPE QUESTIONS

Ref: G455. **2R6**

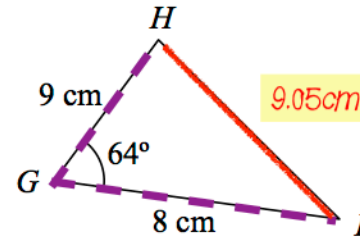
**A1**  $BC^2 = 5^2 + 3^2 - 2 \times 5 \times 3 \times \cos 43^\circ$



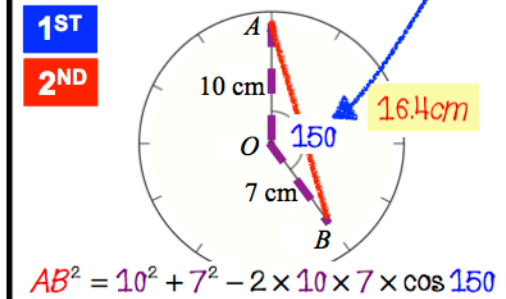
**A2**  $DF^2 = 7^2 + 4^2 - 2 \times 7 \times 4 \times \cos 46^\circ$



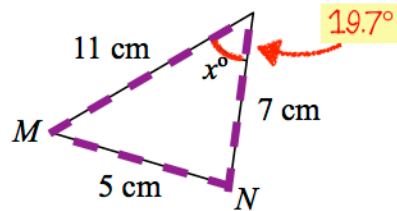
**A3**  $HI^2 = 9^2 + 8^2 - 2 \times 9 \times 8 \times \cos 64^\circ$



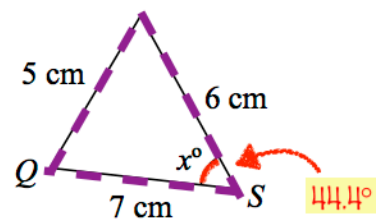
**A4** 1 hour =  $30^\circ$ , so 5 hours =  $150^\circ$



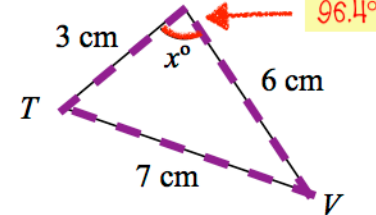
**B1**  $\cos x = \frac{11^2 + 7^2 - 5^2}{2 \times 11 \times 7}$



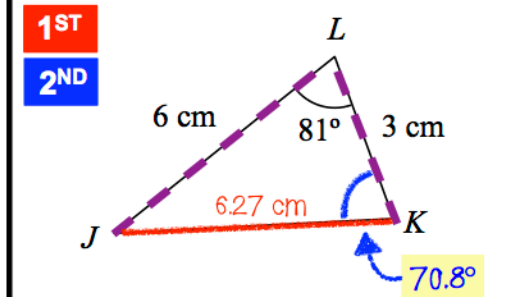
**B2**  $\cos x = \frac{6^2 + 7^2 - 5^2}{2 \times 6 \times 7}$



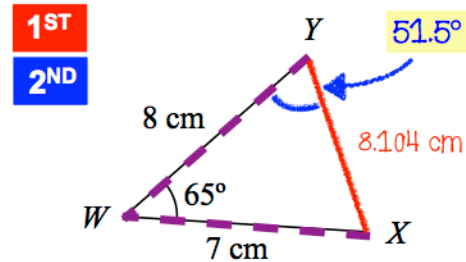
**B3**  $\cos x = \frac{6^2 + 3^2 - 7^2}{2 \times 6 \times 3}$



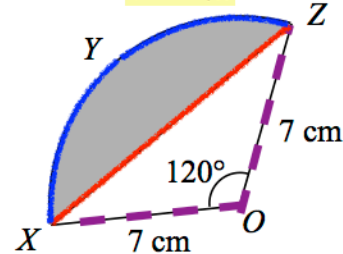
**B4**  $JK^2 = 6^2 + 3^2 - 2 \times 6 \times 3 \times \cos 81^\circ$



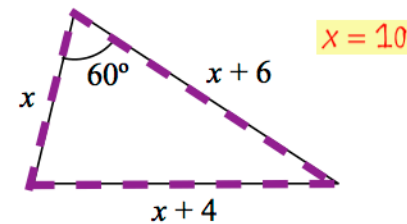
**C1**  $XY^2 = 8^2 + 7^2 - 2 \times 8 \times 7 \times \cos 65^\circ$



**C2** Perimeter =  $12.124 + 14.661 = 26.8$  cm



**C3**  $(x+4)^2 = x^2 + (x+6)^2 - 2(x)(x+6) \times \cos 60^\circ$



**C4**  $(2\sqrt{7})^2 = (2x+1)^2 + (2x-1)^2 - \dots$

