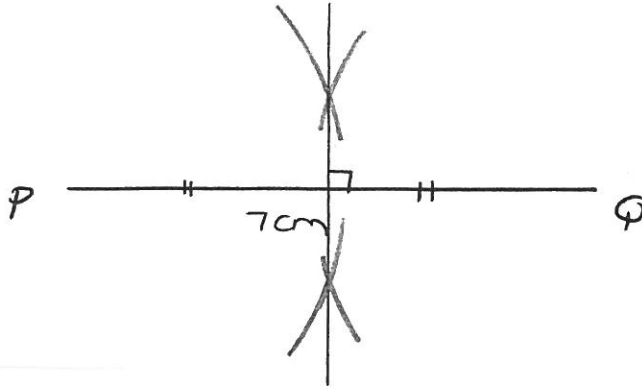


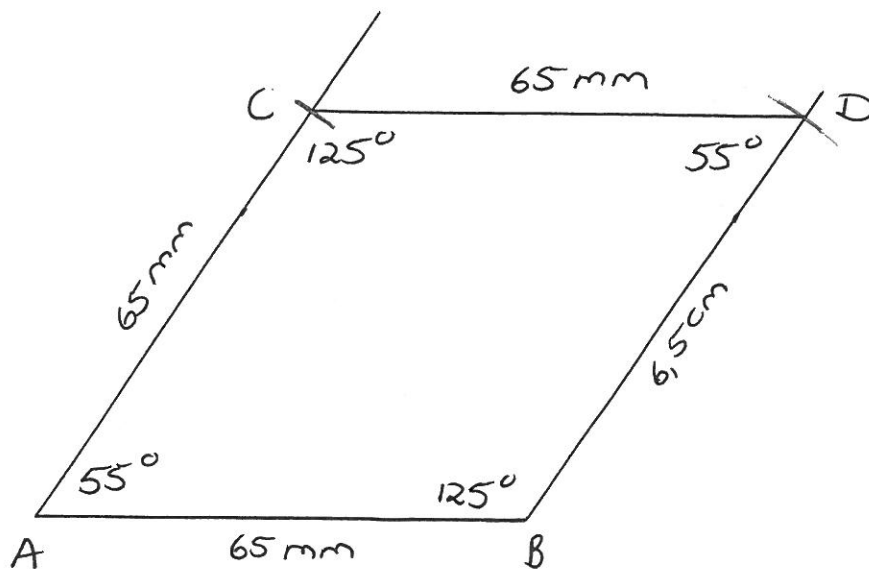
Worksheet 2015-8 EL-00003(1)

- (1) (a) Construct $PQ = 7\text{ cm}$.
(b) Construct the perpendicular bisector of PQ .



- (2) (a) Draw line $AB = 65\text{ mm}$.
(b) Construct $\hat{CAB} = 55^\circ$.
(c) Draw $AC = 65\text{ mm}$.
(d) Construct $\hat{ABD} = 125^\circ$.
(e) Draw $BD = 6,5\text{ cm} = 65\text{ mm}$.
(f) Join CD and measure the unknown sides and angles.
(g) Which type of quadrilateral is $ABDC$?

Rhombus



- (3) (a) Construct $\triangle KLM$ with $\hat{K} = 90^\circ$, $KL = 60 \text{ mm}$ and $KM = 80 \text{ mm}$.
 (b) Bisect $\hat{M}$.
 (c) Measure the length of LM and calculate LM^2 .
 (d) Calculate: $KL^2 + KM^2$
 (e) What do you notice about your answers in (c) and (d)?

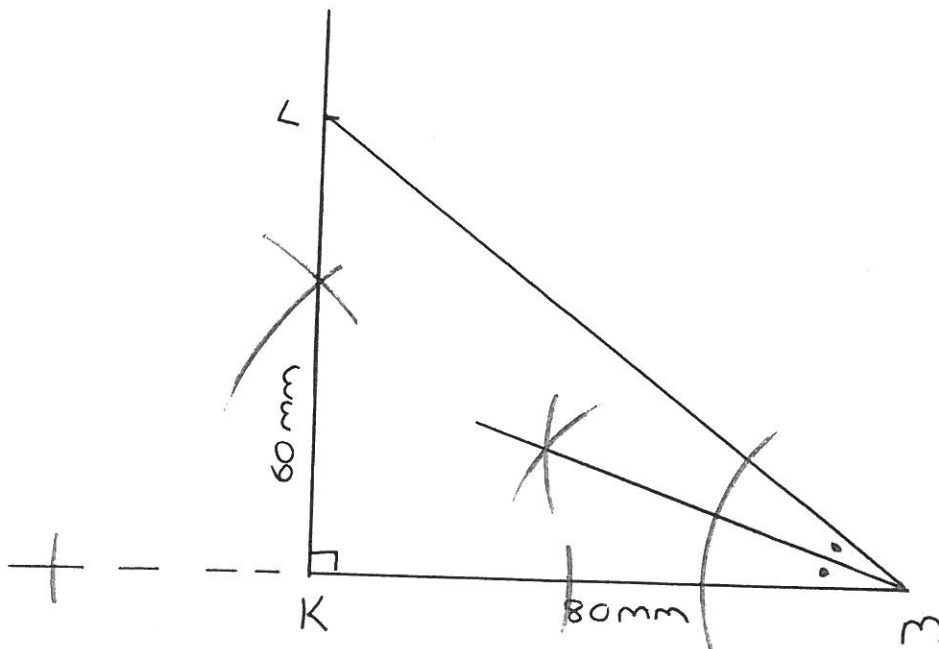
$$(c) \quad LM = 100 \text{ mm} \quad \therefore LM^2 = (100)^2 = 10000$$

$$(d) \quad KL^2 + KM^2 = (60)^2 + (80)^2$$

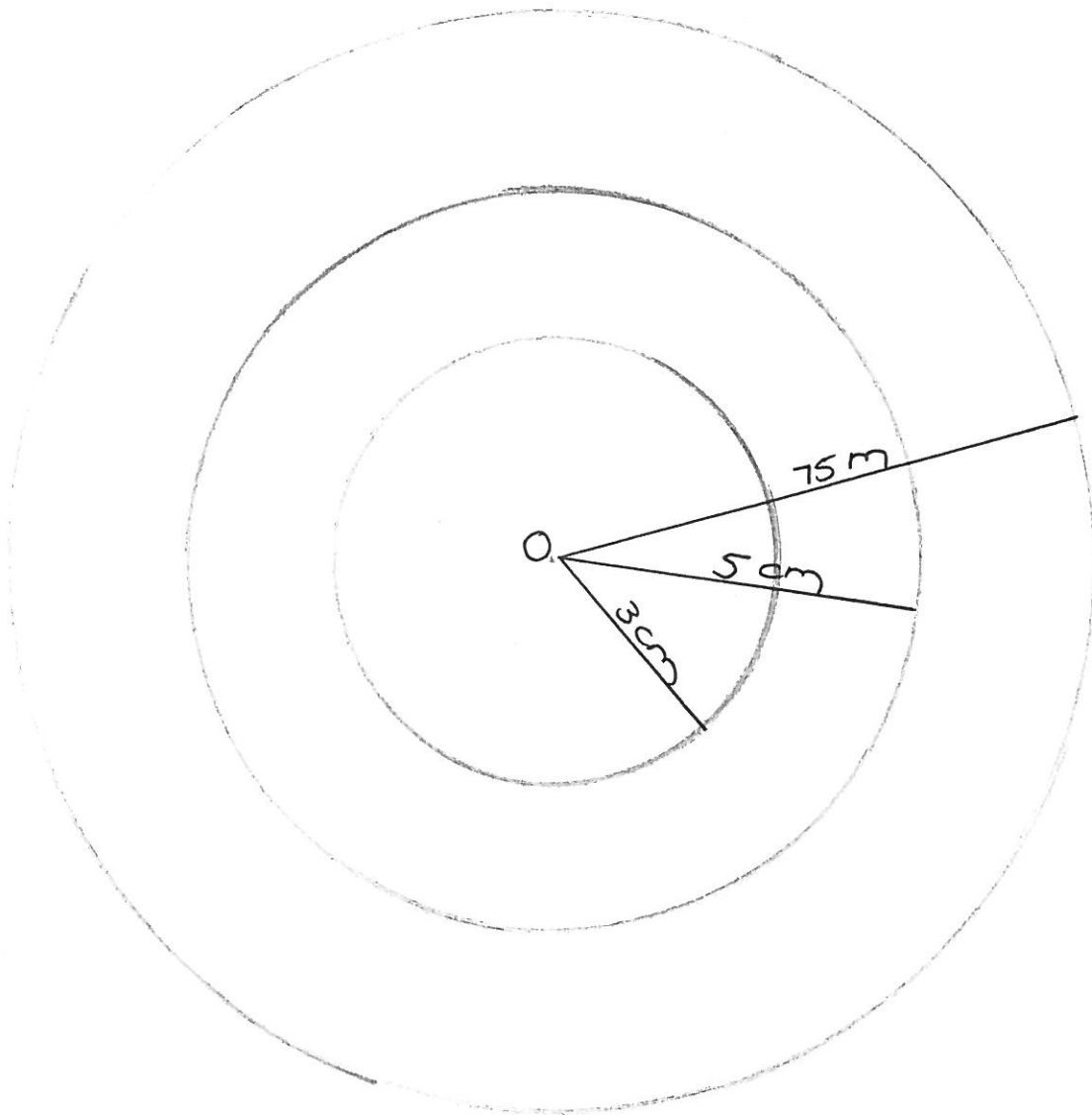
$$= 3600 + 6400$$

$$= 10000$$

$$(e) \quad \therefore LM^2 = KL^2 + KM^2$$



(4) Construct three concentric circles with radii: 3 cm, 5 cm and 75 mm.



(5) (a) Construct the diagram below according to the given dimensions:

$$XY = VW = 10 \text{ cm}$$

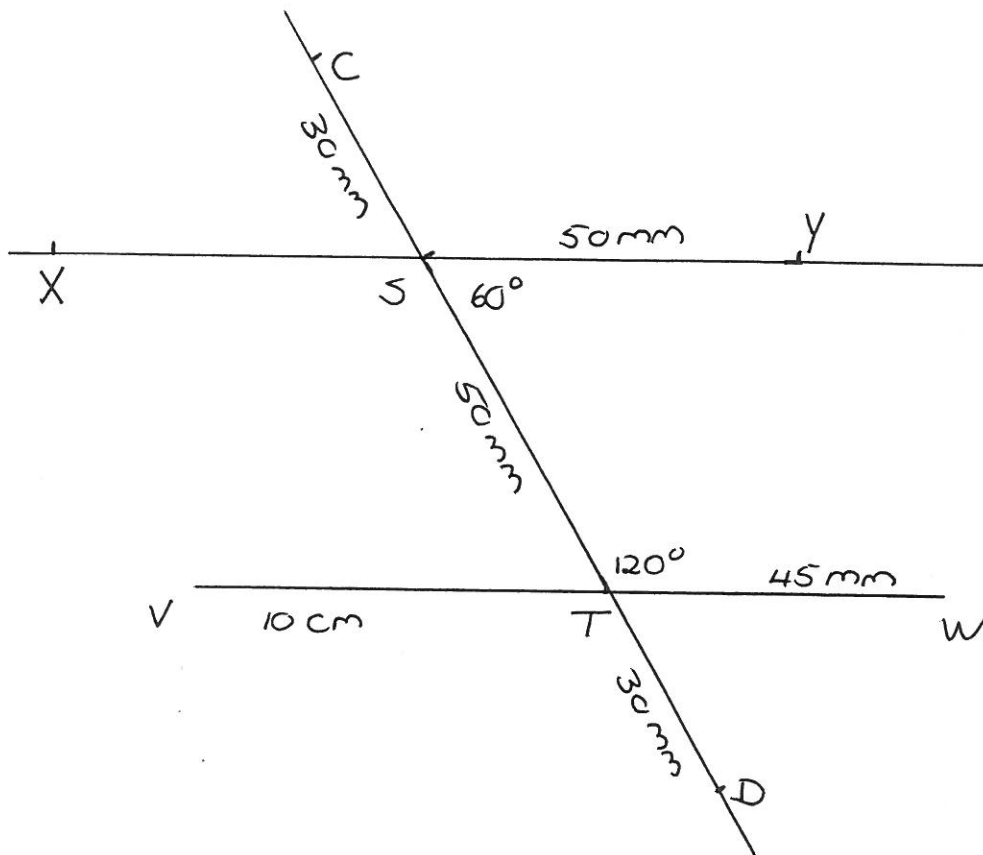
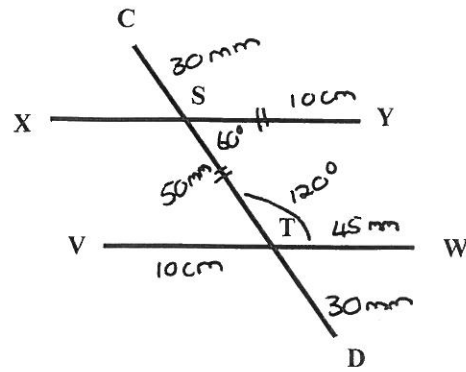
$$WT = 45 \text{ mm}$$

$$\widehat{WTC} = 120^\circ$$

$$ST = SY = 50 \text{ mm}$$

$$\widehat{TSY} = 60^\circ$$

$$CS = TD = 30 \text{ mm}$$



(b) What do you notice regarding XY and VW? Motivate.

$$XY \parallel VW$$

$$\widehat{TSY} + \widehat{STW} = 60^\circ + 120^\circ = 180^\circ$$

and these are co-interior angles.