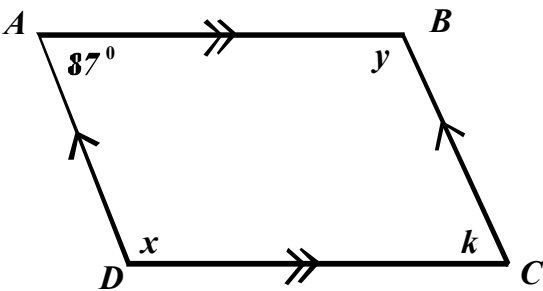
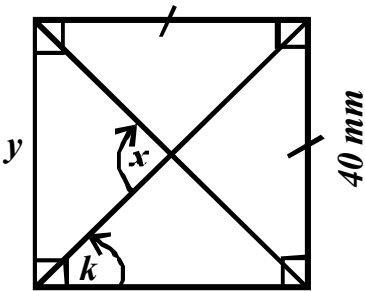


(1) Determine the value(s) of x , y and/or k in each of the following sketches. Also give complete reasons and show all calculations.

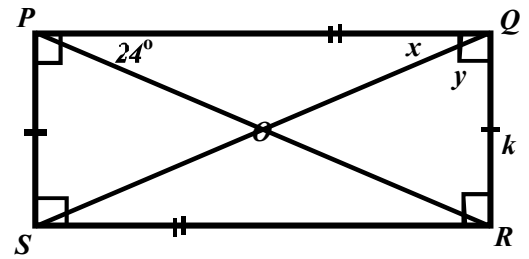
(a)



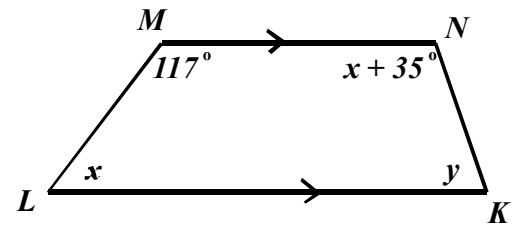
(b)



(c) $SQ = 17$ and $SR = 15$



(d)



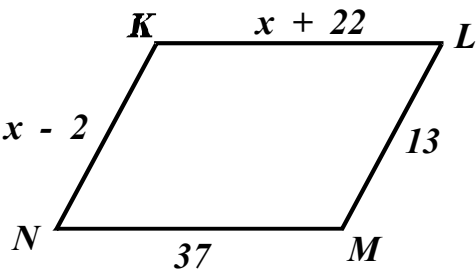
(2) Give the definitions of the following quadrilaterals:

(a) Parallelogram

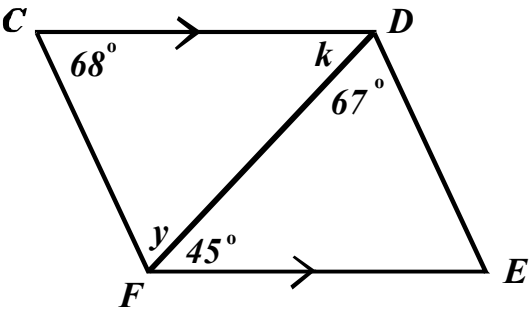
(b) Trapezium

(3) Prove the following quadrilaterals to be parallelograms. Show all steps and calculations.

(a) $x = 15$ cm



(b)



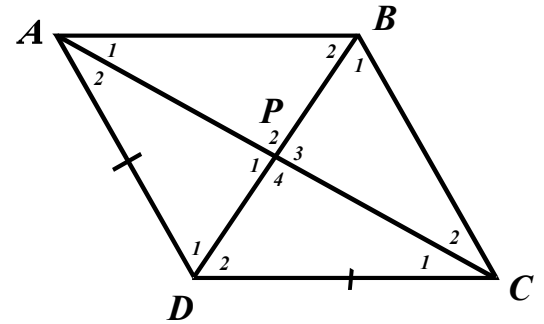
- (4) (a) Construct $AB = 6$ cm.
(b) Construct $\hat{CAB} = 60^\circ$.
(c) Mark $AC = 60$ mm.
(d) Construct $\hat{ACD} = 120^\circ$, with $CD = 6$ cm.
(e) Join B and D .
(f) Measure: DB , $\hat{B}$ and $\hat{D}$
(g) What type of quadrilateral will $ABDC$ be? Motivate your answer.

- (5) (a) What will the sum of the interior angles of a regular nonagon be?

- (b) What will the size of each individual interior angle of a regular nonagon be?

- (c) What will the size of an exterior angle of a regular nonagon be?

- (6) $AB \parallel DC$ and $AD \parallel BC$ in the diagram.
Use the sketch and fill in the missing parts:



Statement:

Reason:

(a) ABCD is a parallelogram

(b) ABCD is a rhombus

(c) $\hat{A}_1 = \hat{C}_1$

(d) $\hat{D}_1 = \hat{D}_2$

(e) _____

Diagonals $\perp$ on one another

(f) _____

Opposite sides of rhombus are equal