



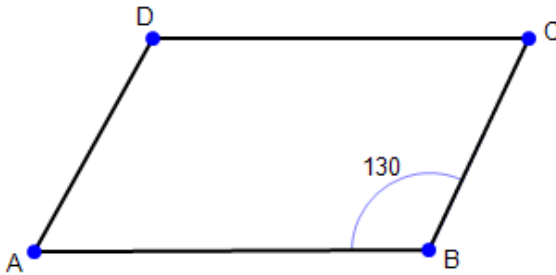
These resources are shared under the licence Attribution-NonCommercial-NoDerivatives 4.0 International

<https://creativecommons.org/licenses/by-nc-nd/4.0/>

Under this licence if you remix, transform, or build upon the material, you may not distribute the modified material.

برائے مہربانی نوٹس کاپی اور استعمال کرتے وقت اس لائسنس کا خیال رکھیں۔

**Q.1** One angle of parallelogram is  $130^\circ$ . Find the measures of its remaining angles.



**Solution:** In a parallelogram  $ABCD$ ,  $m\angle B = 130^\circ$

$$m\angle B = m\angle D \quad (\text{Opposite angles of parallelogram})$$

$$m\angle B = m\angle D = 130^\circ$$

We know that

$$m\angle A + m\angle B = 180^\circ$$

$$m\angle A + 130^\circ = 180^\circ$$

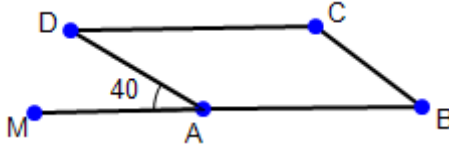
$$m\angle A = 180^\circ - 130^\circ$$

$$m\angle A = 50^\circ$$

Also we have  $m\angle A = m\angle C$  (Opposite angles of parallelogram)

$$\Rightarrow m\angle C = 50^\circ$$

**Q.2** One exterior angle formed on producing one side of a parallelogram is  $40^\circ$ . Find the measures of its interior angles.



**Solution: Given** In a parallelogram  $ABCD$ ,  $m\angle DAM = 40^\circ$

**To find:**  $m\angle B = ?$ ,  $m\angle DAB = ?$ ,  $m\angle C = ?$ ,  $m\angle D = ?$

$$m\angle DAM + m\angle DAB = 180^\circ$$

$$40^\circ + m\angle DAB = 180^\circ$$

$$m\angle DAB = 180^\circ - 40^\circ$$

$$m\angle DAB = 140^\circ$$

$$m\angle DAB + m\angle B = 180^\circ$$

$$140^\circ + m\angle B = 180^\circ$$

$$m\angle B = 180^\circ - 140^\circ$$

$$m\angle B = 40^\circ$$

$$m\angle B = m\angle D = 40^\circ$$

$$\Rightarrow m\angle D = 40^\circ$$

$$m\angle C = m\angle DAB$$

$$m\angle C = 140^\circ$$

## ..... Mathematics 9

by Dr. Karamat H. Dar and Prof. Irfan-ul-Haq.

Published by Carvan Book House, Lahore, Pakistan.

Edition: 2022. Solution Ver. 1.0 Updated: 16-10-2022