

2(iii) $x = \angle 2 = 90^\circ$ (vertically opposite \angle s)

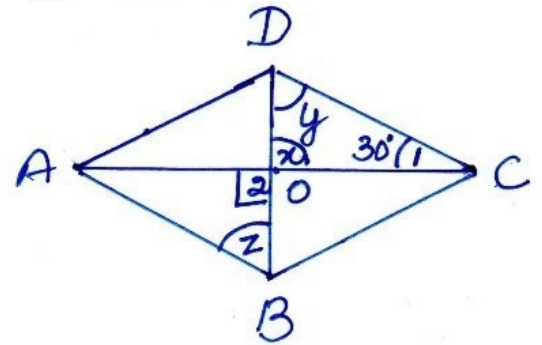
In $\triangle COD$

$$x + y + \angle 1 = 180^\circ \quad (*)$$

$$90^\circ + y + 30^\circ = 180^\circ$$

$$\Rightarrow y = 180 - 120$$

$$\Rightarrow y = 60^\circ$$



$DC \parallel AB$ (opposite sides of a \parallel gm)

$$z = y = 60^\circ$$

(alternate interior angles)

* angle sum property of \triangle

2(iv) $\square ABCD$ is a \parallel gm

$$\angle A + \angle B = 180^\circ \quad (\text{adjacent } \angle\text{s of a } \parallel\text{gm})$$

$$x + 80 = 180$$

$$\Rightarrow x = 180 - 80 = 100^\circ$$

$$\angle D = \angle B \quad (**)$$

$$y = 80^\circ$$

$$\angle C = \angle A \quad (**)$$

$$= x$$

$$= 100^\circ$$

$$\angle C + \angle Z = 180^\circ \quad (\text{linear pair})$$

$$100 + Z = 180$$

$$\Rightarrow Z = 180 - 100 = 80^\circ$$

(**) opposite \angle s of a \parallel gm

