

# Assignment

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Q 8b.

$$\angle BAQ = 30^\circ$$

$$\Rightarrow \angle BAC = 30^\circ$$

$$\text{also } \angle CAP = 180^\circ - \angle CAQ \Rightarrow \angle CAP = 120^\circ$$

$$\Rightarrow \angle CAD = \angle PAD = 60^\circ$$

$$\Rightarrow \angle BAD = 90^\circ$$

$$\Rightarrow BD \text{ is a diameter}$$

$$\angle ADB = \angle ACB = 30^\circ \text{ [Angle made a chord at two different points]}$$

$$\text{also } \angle CAB = 30^\circ$$

$$\Rightarrow \triangle ABC \text{ is an isosceles triangle}$$

