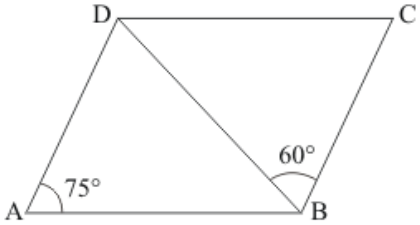
Quadrilaterals Ex 14.2 Q8

**Answer :**

The figure is given as follows:




It is given that *ABCD* is a parallelogram.

Thus $AD \| BC$

And $\angle DBC$ are $\angle ADB$ alternate interior opposite angles.

Therefore,

$\angle ADB = \angle DBC$

$\angle ADB = \boxed{60^0}$ ..... (i)

We know that the opposite angles of a parallelogram are equal. Therefore,

$\angle A = \angle C$

Also, we have $\angle A = 75^0$

Therefore,

$\angle C = 75^0$ ..... (ii)

In $\Delta BCD$

By angle sum property of a triangle.

$$\angle CDB + \angle ADB + \angle C = 180^0$$

From (i) and (ii),we get:

$$\angle CDB + 60^0 + 75^0 = 180^0$$

$$\angle CDB + 135^0 = 180^0$$

$$\angle CDB = 180^0 - 135^0$$

$$\angle CDB = \boxed{45^0}$$

Hence, the required value for $\angle ADB$ is $\boxed{60^0}$

And $\angle CDB$ is $\boxed{45^0}$.

********** END **********