

Решение:

$$\angle A \sim \angle DBC, \angle ABD \sim \angle C \Rightarrow$$

$\triangle ABD \sim \triangle BDC$ - по 2 углам. $\Rightarrow$

$$\frac{AD}{BD} = \frac{BD}{DC}.$$

$$BD^2 = AD \cdot DC$$

$$BD^2 = 4 \cdot 16$$

$$BD = \sqrt{64}$$

$$BD = 8$$