



$$\tan B = \frac{1}{2} \quad C$$

$$\tan B = \frac{AC}{CB} \rightarrow 2AC = CB \rightarrow CB = 2 \cdot 6$$

~~$$AB^2 = 3^2 + 6^2 = 9 + 36 = 45$$~~

~~$$AB = 3\sqrt{5}$$~~

$$AB^2 = 6^2 + 12^2 = 6^2 (1 + 2^2) = 6^2 \cdot 5$$

$$AB = 6\sqrt{5}$$