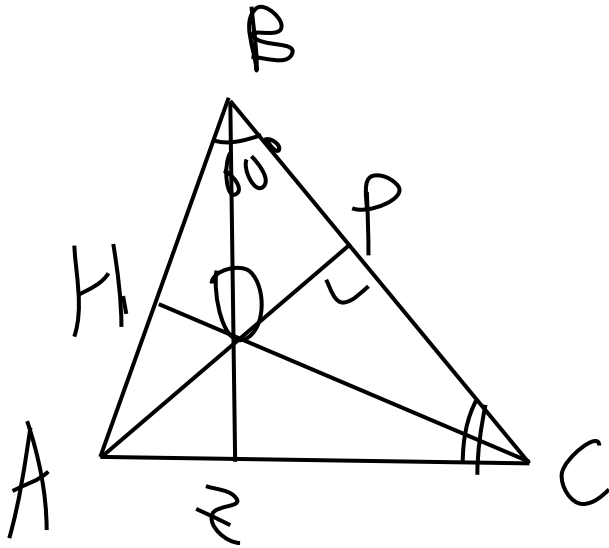


В тр ABC $\sin B = \sqrt{3}/2$ $\cos C = 1/3$ Найти отношение высот, опущенных из вершин B и C соответственно на стороны AC и AB



$$\sin B = \sqrt{3}/2 = \text{CH}/CB = AP/AB$$

$$\cos C \Rightarrow \sin C = \sqrt{1 - 1/9} = 2\sqrt{2}/3$$

$$\sin C = 2\sqrt{2}/3 = AP/AC = \text{BZ}/BC$$

$$\text{CH} = AP \cdot CB/AB$$

$$\text{BZ} = AP \cdot BC/AC$$

$$\text{CH}/\text{BZ} = AC/AB$$

$$\text{CH} = \sqrt{3}/2 \cdot CB$$

$$\text{BZ} = 2\sqrt{2}/3 \cdot BC$$

$$\text{CH}/\text{BZ} = \sqrt{3}/2 \cdot 3/2\sqrt{2} = 3\sqrt{3}/4\sqrt{2} = 3\sqrt{6}/8$$

$$\text{BZ}/\text{CH} = 8\sqrt{6}/3 \cdot 6 = 4\sqrt{6}/9$$