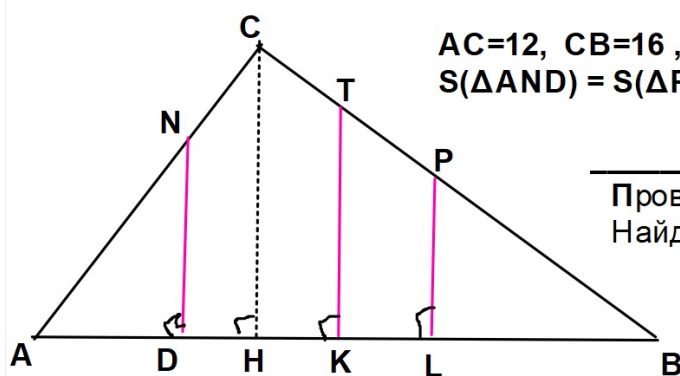




$$AC=12, CB=16, AB=20$$

$$S(\triangle AND) = S(\triangle PLB) = S(\triangle NCTKD) = S(\triangle KTPL)$$

$$DL=?$$

Проведем высоту CH.

Найдем площадь $S(\triangle ABC)$ по теореме Герона.

$$P(\triangle ABC) = 12 + 16 + 20 = 48$$

$$p = P/2 = 48/2 = 24$$

$$S(\triangle ABC) = \sqrt{p(p-a)(p-b)(p-c)} = \sqrt{24(24-20)(24-16)(24-12)} = 96$$

$$\Rightarrow 0.5 \cdot AB \cdot CH = 96 \Rightarrow CH = 96 / (0.5 \cdot 20) = 9.6 \Rightarrow AH = \sqrt{AC^2 - CH^2} = \sqrt{144 - 9.6^2} = 7.2 \quad HB = 20 - 7.2 = 12.8$$

$$S(\triangle AND) = S(\triangle PLB) = S(\triangle NCTKD) = S(\triangle KTPL) = 96/4 = 24$$

$$S(\triangle ACH) = 0.5 \cdot AH \cdot CH = 0.5 \cdot 7.2 \cdot 9.6 = 34.56 \quad S(\triangle ABC)/4 < 34.56 < S(\triangle ABC)/2 \Rightarrow H \text{ находится между D и K.}$$

$$\text{Заметим, что } \triangle ACH \sim \triangle AND \text{ (угол-угол)} = k = AD/AH = \sqrt{S(\triangle AND)/S(\triangle ACH)} = \sqrt{24/34.56} = 5/6$$

$$\Rightarrow AD = 5 \cdot AH/6 = 7.2 \cdot 5/6 = 6$$

$$\text{Заметим, что } \triangle PLB \sim \triangle CHB \text{ (угол-угол)} = k = LB/BH = \sqrt{S(\triangle PLB)/S(\triangle PCH)} = \sqrt{24/51.44} = 5/8$$

$$\Rightarrow LB = 5 \cdot BH/8 = 7.2 \cdot 5/6 = 8$$

$$\Rightarrow DL = 20 - AD -$$

$$BL = 20 - 6 - 8 = 6 \text{ cm}$$