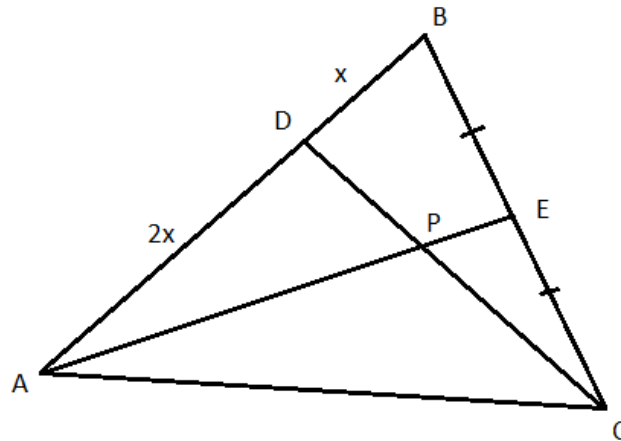


Answer on Question #56335 – Math – Geometry

In a triangle ABC, E is the midpoint of BC and D is a point on AB such that $AD : DB = 2 : 1$. If CD and AE intersect at P, determine the ratio $CP : PD$.



Solution

Let's consider the triangle CDB which is cut by the line AE . According to Menelaus' theorem:

$$\frac{BE}{EC} * \frac{CP}{PD} * \frac{DA}{AB} = 1$$

So

$$\frac{CP}{PD} = \frac{EC}{BE} * \frac{AB}{DA} = 1 * \frac{2x + x}{2x} = \frac{3}{2}$$

Answer: $\frac{3}{2}$.