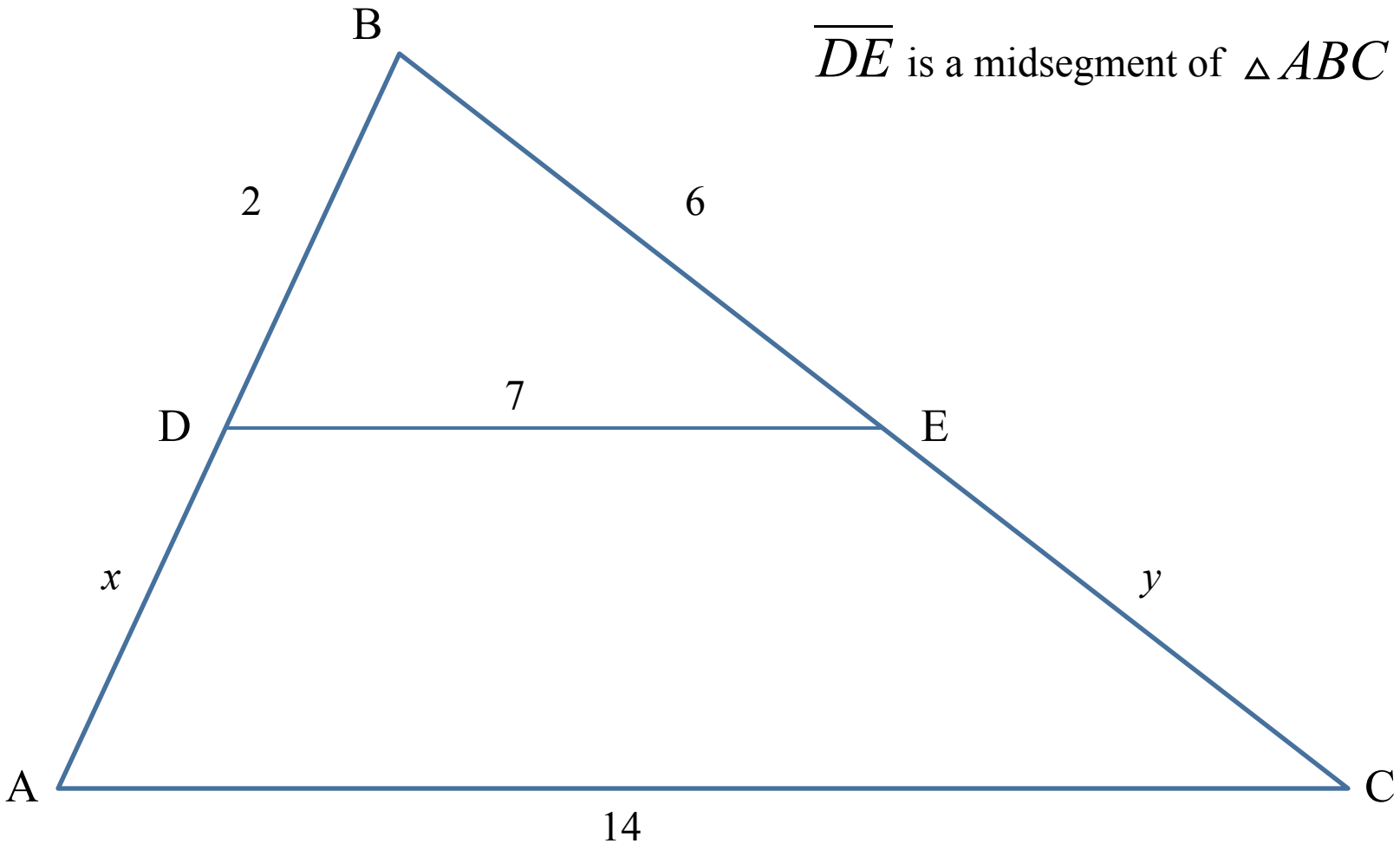
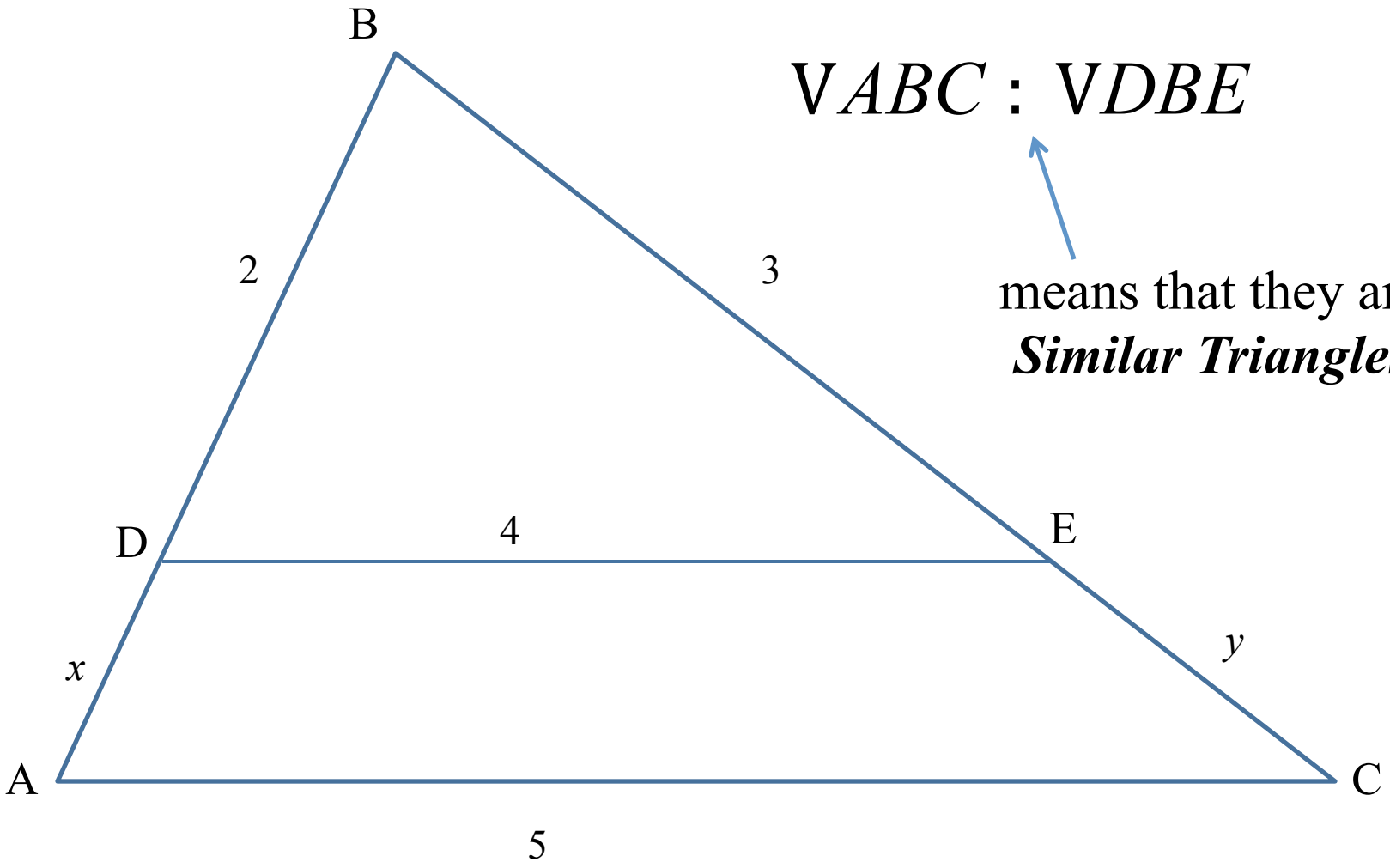
Similar Polygons

Standards 7_



So $x = 2$ and $y = 6$

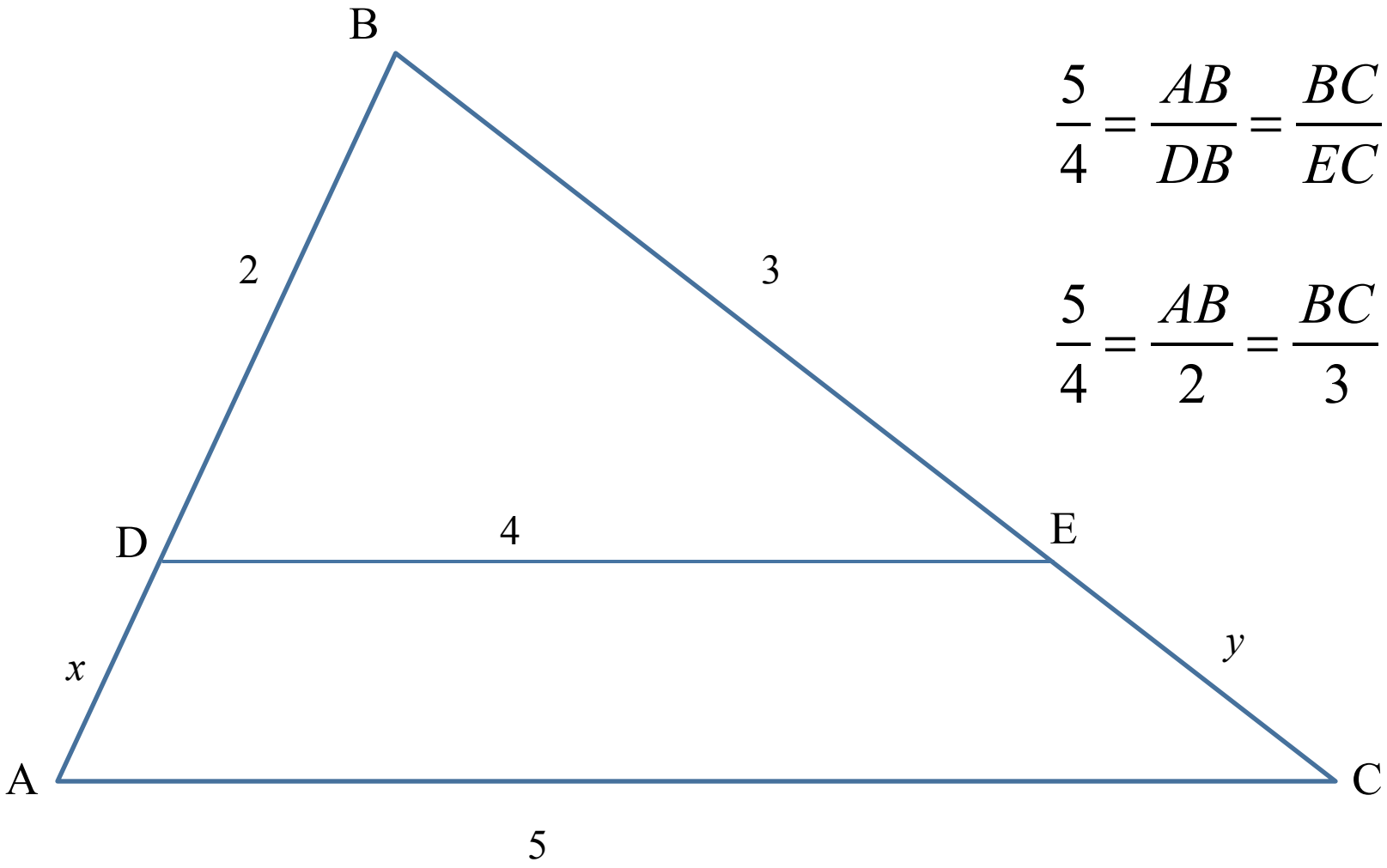


$$V ABC : V DBE$$

means that they are
Similar Triangles

and therefore the lengths of their corresponding sides are proportional

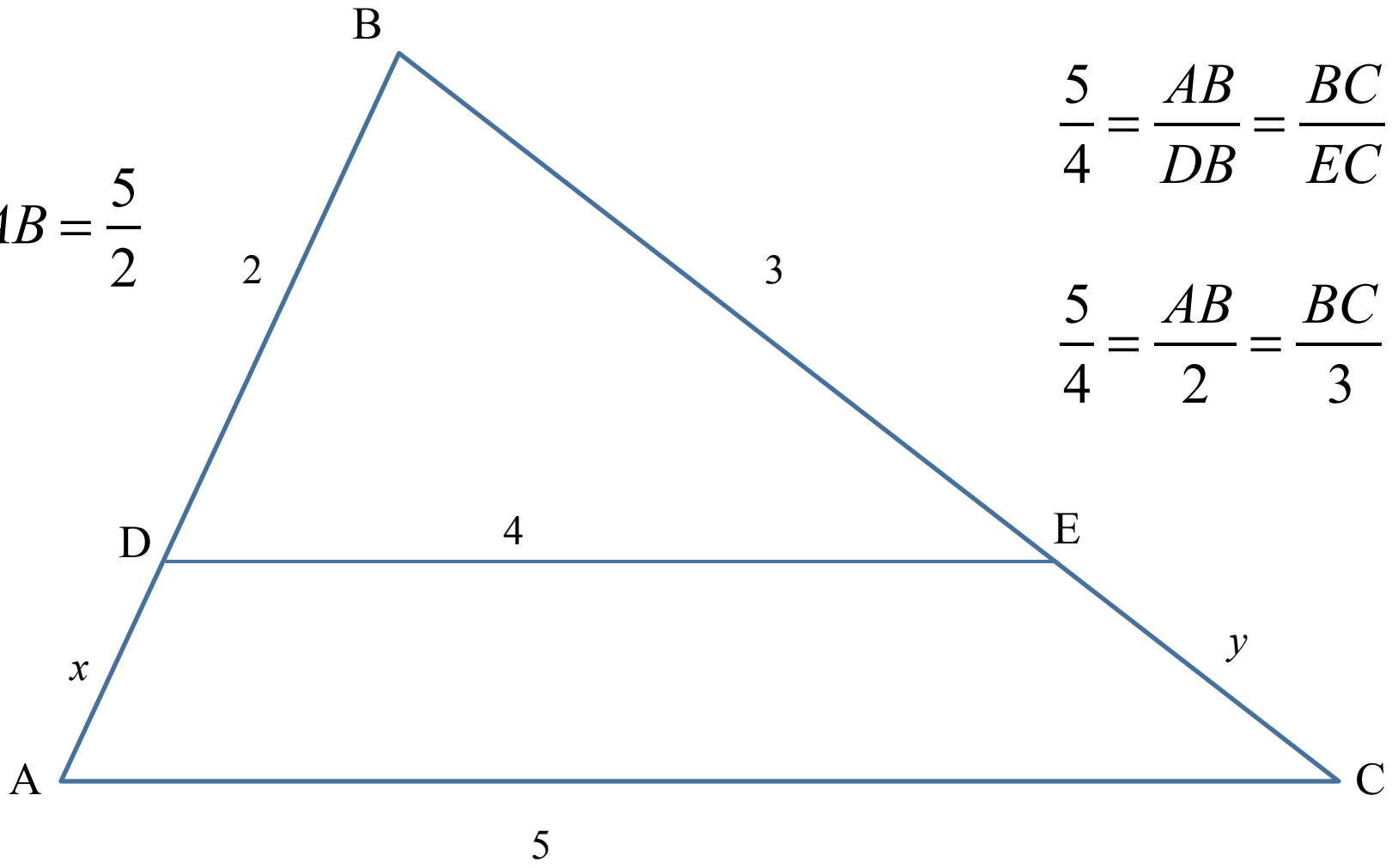
$$\frac{5}{4} = \frac{AB}{DB} = \frac{BC}{EC}$$



$$\frac{5}{4}=\frac{AB}{DB}=\frac{BC}{EC}$$

$$\frac{5}{4}=\frac{AB}{2}=\frac{BC}{3}$$

$$\frac{5}{4}=\frac{AB}{2} \longrightarrow 10=4(AB) \longrightarrow AB=\frac{5}{2}$$



$$AB = \frac{5}{2}$$

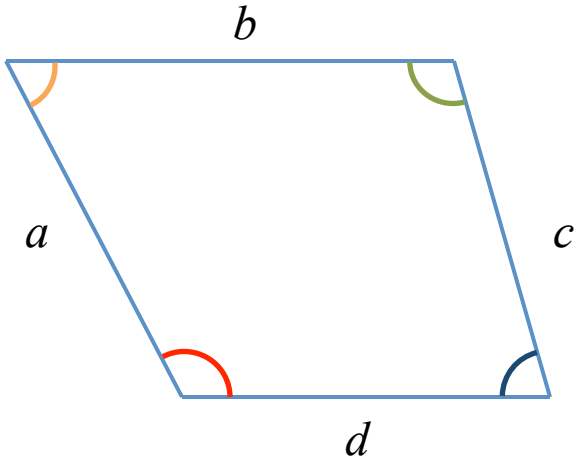
$$\frac{5}{4} = \frac{AB}{DB} = \frac{BC}{EC}$$

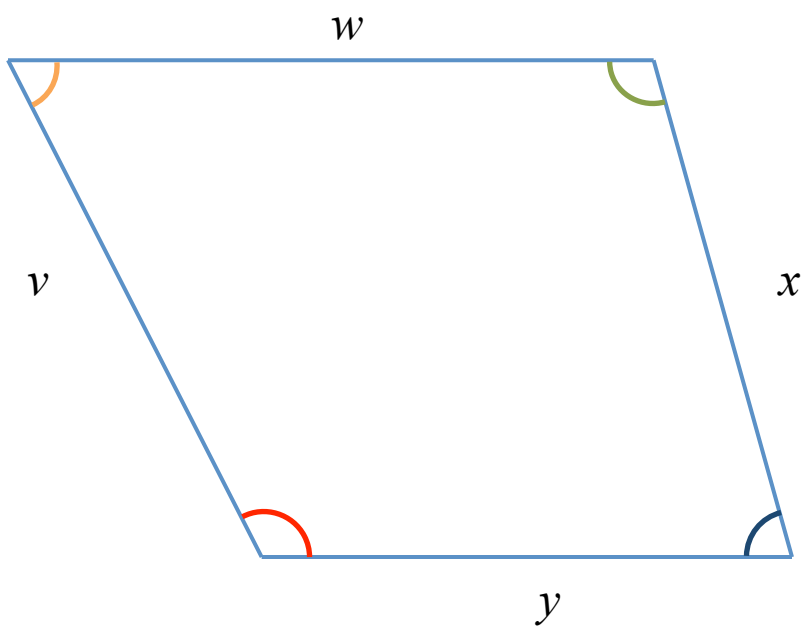
$$\frac{5}{4} = \frac{AB}{2} = \frac{BC}{3}$$

$$\frac{5}{4} = \frac{BC}{3} \longrightarrow 15 = 4(BC) \longrightarrow BC = \frac{15}{4}$$

$$x = \frac{1}{2}$$

$$y = \frac{3}{4}$$





$$\frac{a}{v} = \frac{b}{w} = \frac{c}{x} = \frac{d}{y}$$

Similar Polygons

- Have congruent corresponding angles
- Have proportional corresponding side lengths

…and these are both biconditional