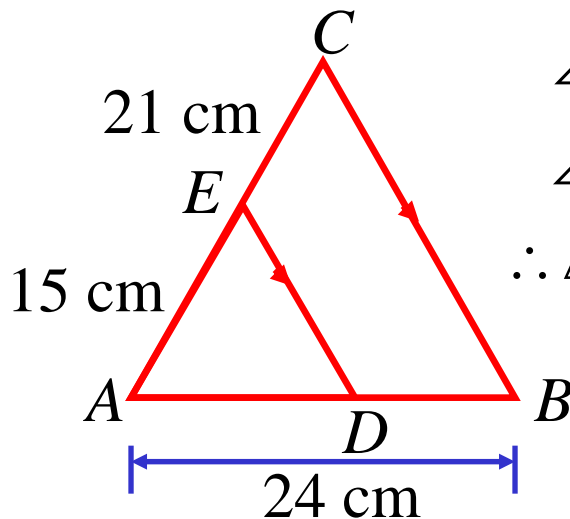


Similar Triangles

TESTS

- (1) Corresponding sides are in proportion (*SSS – with ratio $a:b$*)
- (2) Two pairs of corresponding sides are in proportion AND the included angles are equal (*SAS – with ratio $a:b$*)
- (3) All three angles are the same as the three angles in the other (*AA*)

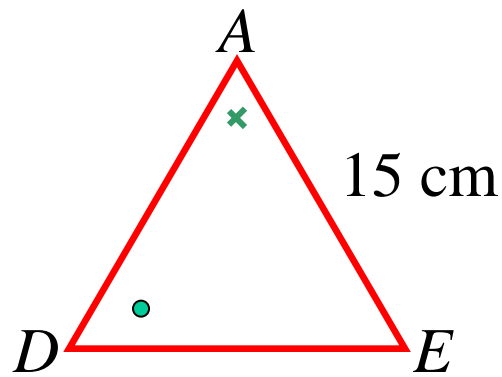
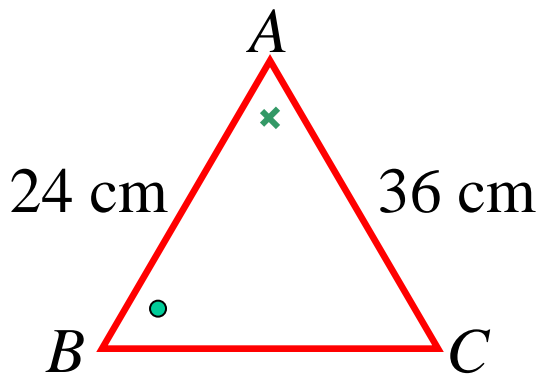
e.g. Find AD



$$\angle DAE = \angle BAC \quad (\text{common } \angle)(A)$$

$$\angle EDA = \angle CBA \quad (\text{corresponding } \angle\text{'s, } BC \parallel DE)(A)$$

$$\therefore \triangle DAE \parallel \triangle BAC \quad (AA)$$



$$\frac{AD}{AB} = \frac{AE}{AC}$$

(ratio of sides in || Δ 's)

$$\frac{AD}{24} = \frac{15}{36}$$

$$\underline{AD = 10\text{cm}}$$

In similar shapes;

If sides are in the ratio $a : b$

area is in the ratio $a^2 : b^2$

volume is in the ratio $a^3 : b^3$

**Exercise 8H; 2bd, 4ab, 6bc,
8, 12, 16, 18, 20, 21, 24***