

5th exercise

- 1) Drawn on last page
2) In Δ 's OAC & OBD apply converse of Thales' property.

$$\frac{OA}{OB} \stackrel{?}{=} \frac{OC}{OD} \stackrel{?}{=} \frac{AC}{BD}$$

(1) (2) (3)

From ratios (1) & (2).

$$\frac{OA}{OB} = \frac{OC}{OD}$$

$$R = 2\text{cm}; R' = 3R = 6\text{cm}$$

$$\frac{2}{6} \stackrel{?}{=} \frac{2}{6} \checkmark$$

Thus, $(AC) \parallel (BD)$

$$\text{And } \frac{AC}{BC} = \frac{1}{3}$$

- 3) In Δ 's OBC and OED we have
 $(BC) \parallel (ED)$ given
So, apply Thales' property.

$$\frac{OB}{OE} = \frac{OC}{OD} = \frac{BC}{ED}$$

(a) (b) (c)

From ratios (b) & (c).

$$\text{Thus, } \frac{OC}{OD} = \frac{BC}{ED}$$

$$\text{NOW, } \frac{2}{6} = \frac{x}{ED}$$