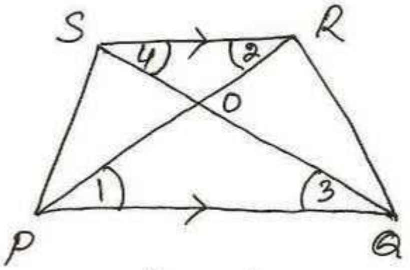
(4)



given: In fig $PQ = 3SR$

to find $\dfrac{ar(\Delta POQ)}{ar(\Delta ROS)}$

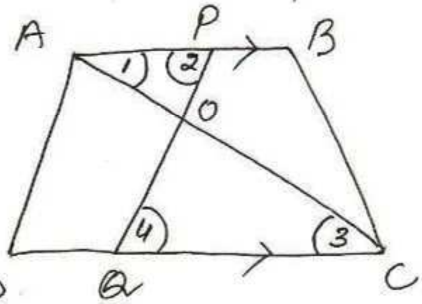
Sol $PQ \parallel SR$

$\angle 1 = \angle 2$ (alternate interior ∠s)
$\angle 3 = \angle 4$

$\Delta POQ \sim \Delta ROS$ by AA cor.

$$\frac{ar(\Delta POQ)}{ar(\Delta ROS)} = \frac{PQ^2}{SR^2} = \frac{(3SR)^2}{SR^2} = \frac{9SR^2}{SR^2} = \frac{9}{1}$$

(5)



To prove $OA.CQ = OC.AP$

Proof $AB \parallel DC$

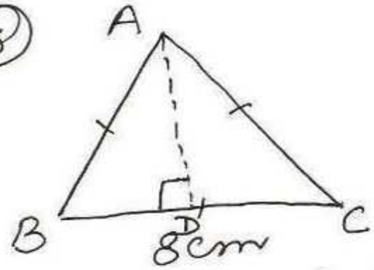
$\angle 1 = \angle 3$ (alternate in. ∠s)
$\angle 2 = \angle 4$

$\Delta AOP \sim \Delta COQ$ by AA cor.

$\Rightarrow \dfrac{OA}{OC} = \dfrac{AP}{CQ}$

$\Rightarrow OA.CQ = OC.AP$

(6)



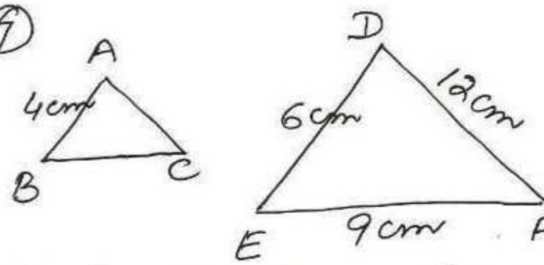
al. of equilateral Δ

$= \dfrac{\sqrt{3}}{4} s^2$

$= \dfrac{\sqrt{3}}{\cancel{4}} \times 8 \times \cancel{8}^{\,2}$

$= 16\sqrt{3}$ cm

(7)



To find Perimeter of ΔABC

Solution

$\Delta ABC \sim \Delta DEF$

$\Rightarrow \dfrac{AB}{DE} = \dfrac{BC}{EF} = \dfrac{AC}{DF}$

$\dfrac{\cancel{4}^{\,2}}{\cancel{6}_{\,3}} = \dfrac{BC}{9} = \dfrac{AC}{12}$

$\dfrac{BC}{9} = \dfrac{2}{3}$ | $\dfrac{AC}{12} = \dfrac{2}{3}$

$\Rightarrow BC = 6$cm | $AC = 8$cm

Per. of $\Delta ABC = 4+6+8$
$= 18$cm