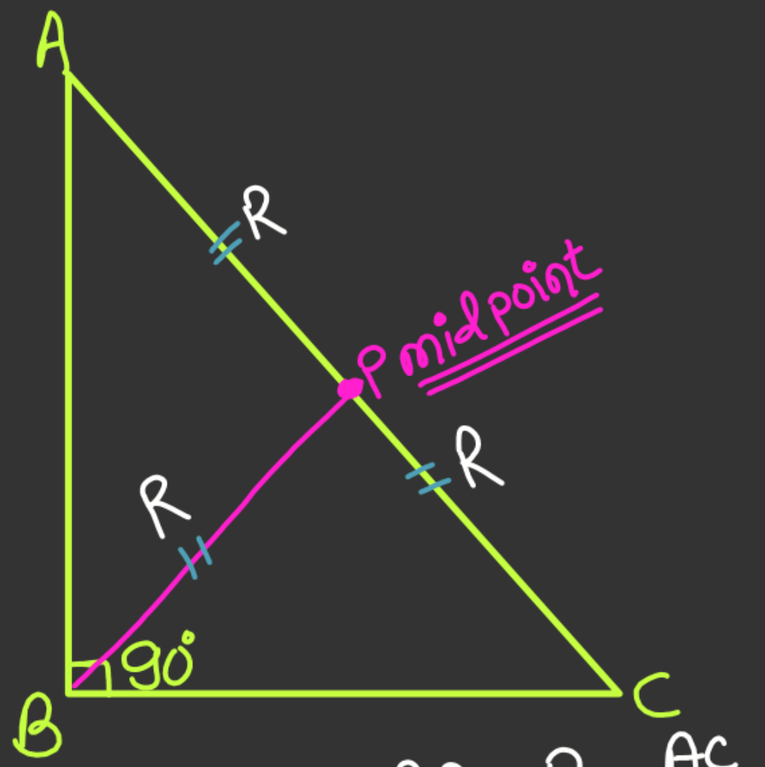
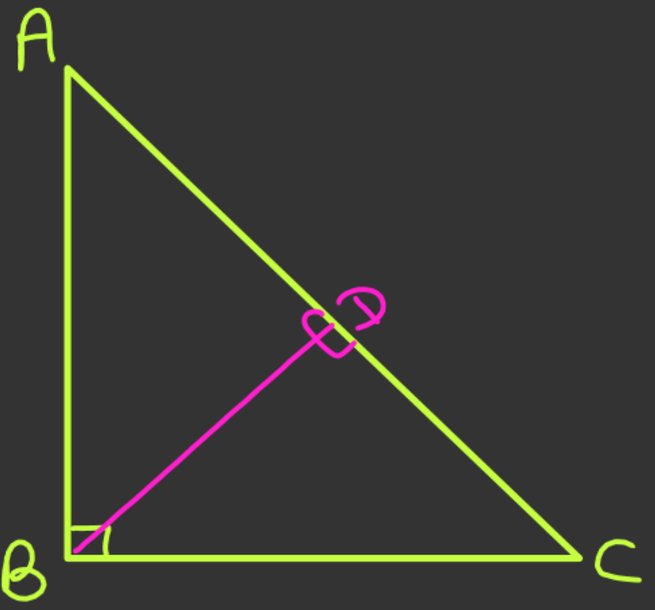



$$AP = PC = BP = R = \frac{AC}{2}$$




Goldenrule

$$AC^2 = AB^2 + BC^2$$

① $$BD = \frac{AB \times BC}{AC}$$

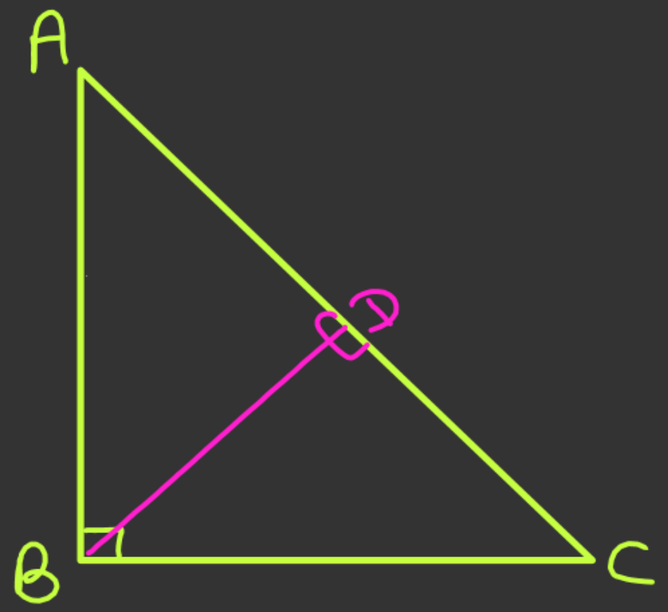
$$ar\triangle ABC = \frac{1}{2} \times BC \times AB = \frac{1}{2} \times AC \times BD$$

$$\frac{AB \times BC}{AC} = BD$$

ii $$\frac{1}{BD^2} = \frac{1}{AB^2} + \frac{1}{BC^2}$$

$$\left(\frac{1}{BD}\right)^2 = \left(\frac{AC}{AB \times BC}\right)^2$$

$$\frac{1}{BD^2} = \frac{AC^2}{AB^2 \times BC^2} = \frac{AB^2 + BC^2}{AB^2 \times BC^2} = \frac{1}{AB^2} + \frac{1}{BC^2}$$




Goldenrule

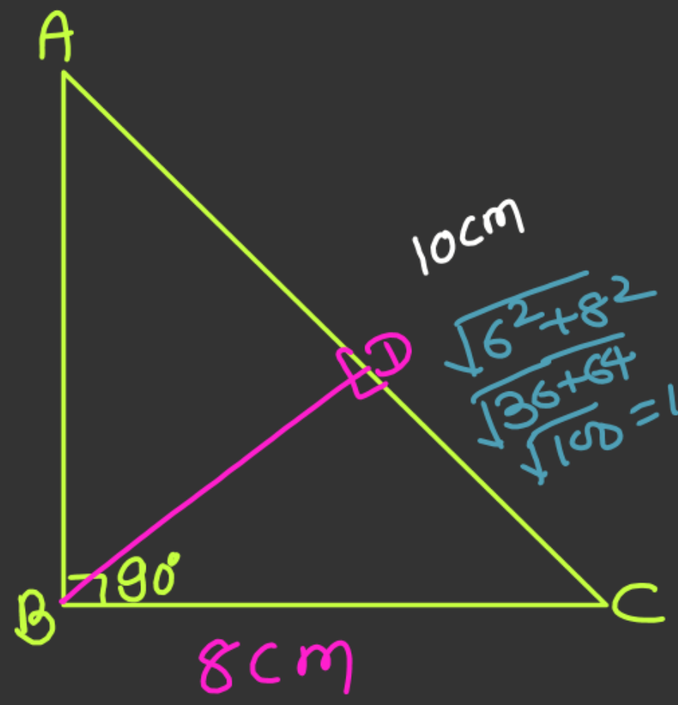
(iii) $BD^2 = AD \times DC$

(iv) $AB^2 = AD \times AC$

(v) $BC^2 = CD \times AC$

(vi) $\frac{AB^2}{BC^2} = \frac{AD \times AC}{CD \times AC} = \frac{AD}{CD}$

(i)



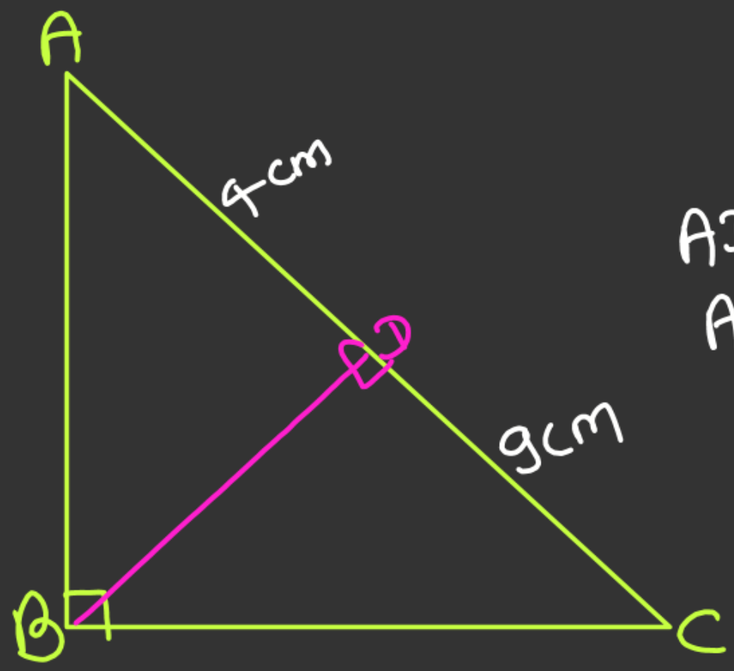

$\sqrt{6^2+8^2}$

$\sqrt{36+64}$

$\sqrt{100}=10$

$BD = \frac{6 \times 8}{10} = 4.8$

(ii)




$AD = 4cm$

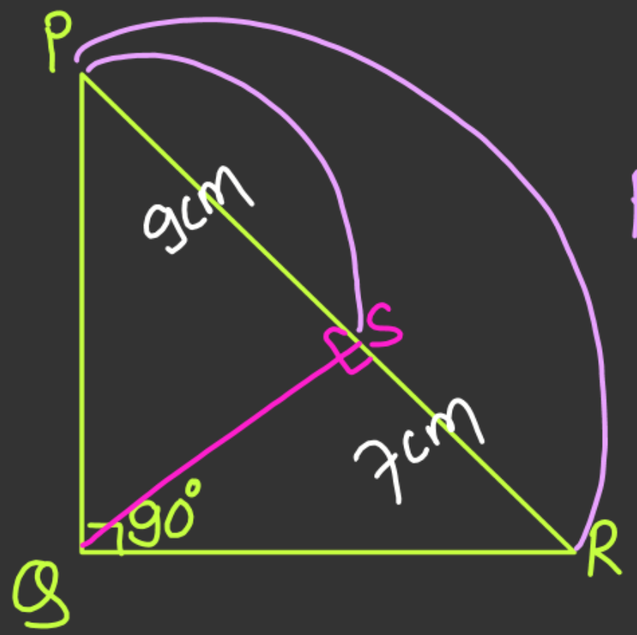
$AC = 13cm$

$BD =$

$BD^2 = AD \times DC$

$BD^2 = 4 \times 9$

$BD = \sqrt{36} = 6cm$




$PQ^2 = PS \times PR$

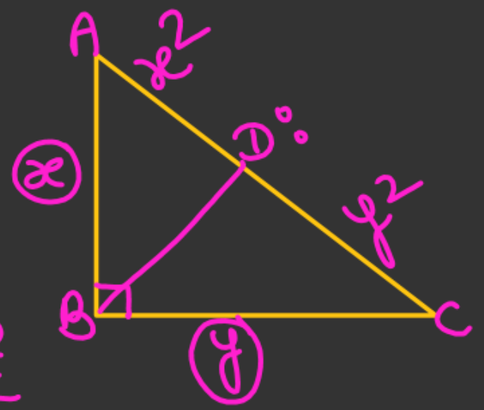
$= 9 \times 16$

$PQ = \sqrt{144} = 12cm$

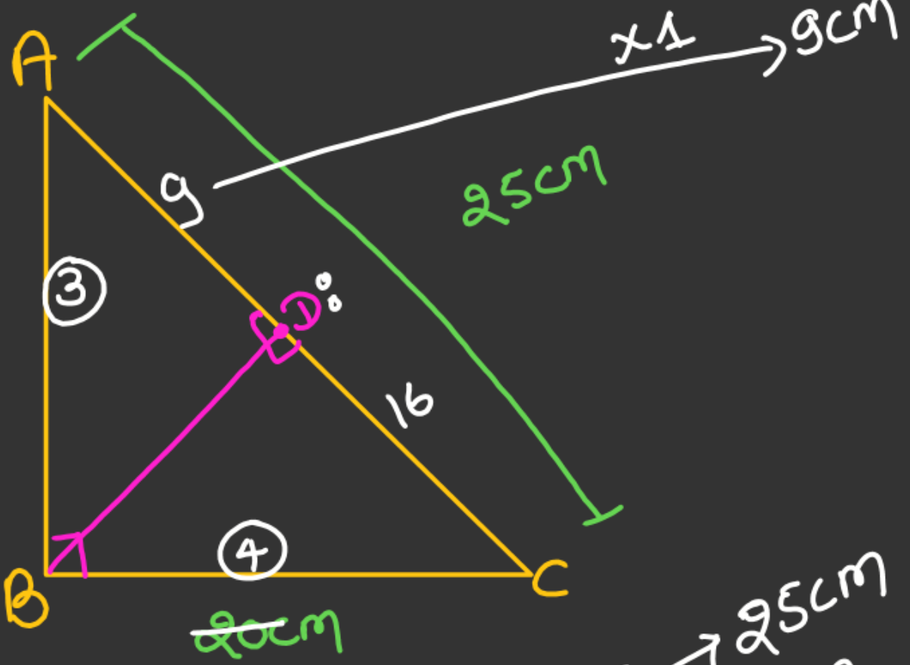
$PS = 9cm$

$SR = 7cm$

$PQ =$




$\frac{x^2}{y^2} = \frac{AB^2}{BC^2} = \frac{AD}{DC}$




$AB = 15cm$

$BC = 20cm$

$AD =$

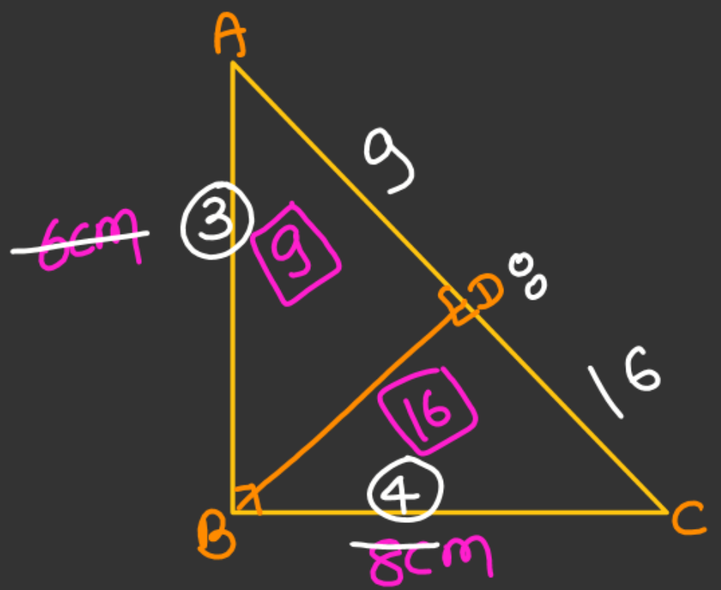
$AB^2 = AD \times AC$

$15 \times 15 = AD \times 25$

$9$

$25 \rightarrow 25cm$

$1 \rightarrow 1cm$




$AB \to 6cm$

$BC \to 8cm$

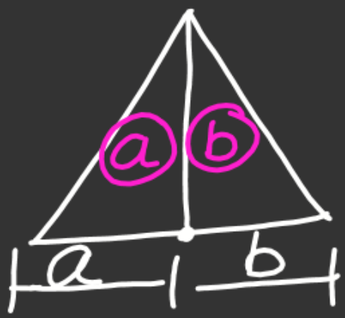
$ar\,\Delta ABD =$

$ar\,\Delta ABC = \frac{1}{2} \times 6 \times 8 = 24cm^2$

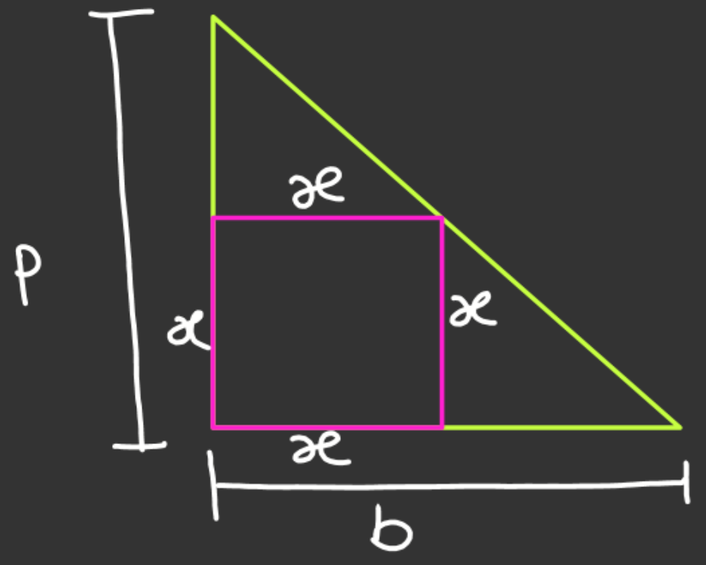
$\therefore 25 \to 24cm^2$

$\therefore 9 \to \frac{24}{25} \times 9$

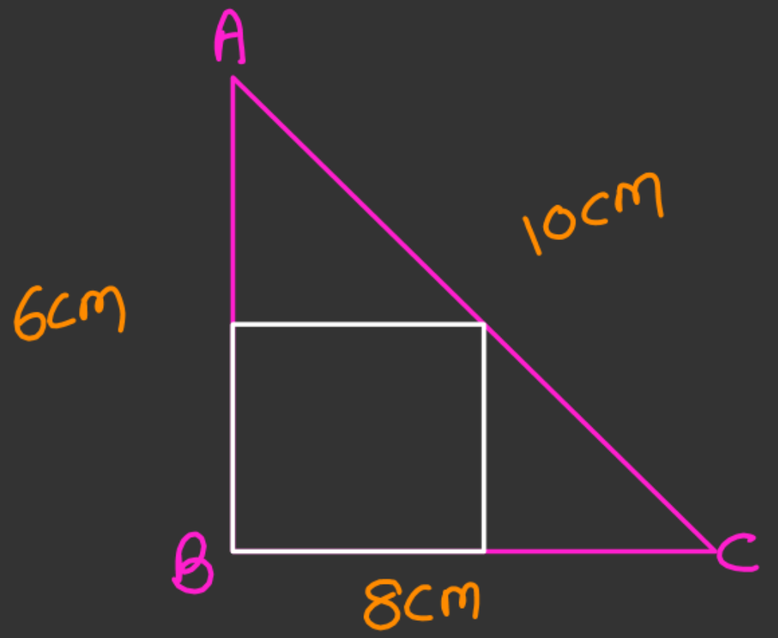
$= \frac{216}{25}\,cm^2$



# #concept




$$x = \frac{P \times b}{P + b}$$




वर्ग का भुजा $= \frac{6 \times 8}{6+8}$

$= \frac{48}{14} = \frac{24}{7}$

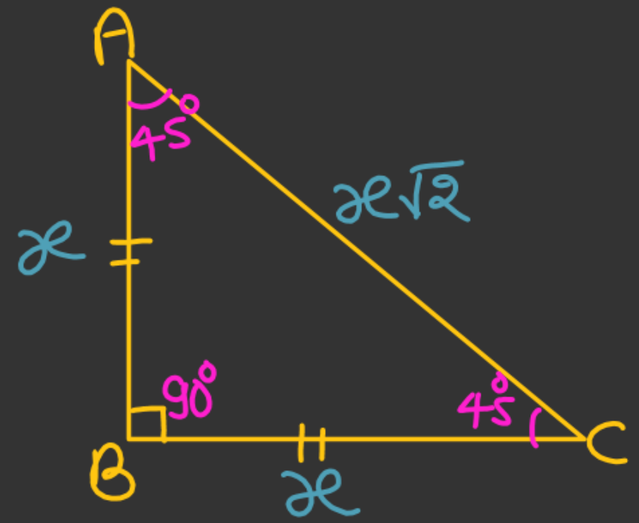
$AB \rightarrow 6cm$

$AC \rightarrow 10cm$

वर्ग का क्षेत्रफल $= \left(\frac{24}{7}\right)^2 = \frac{576}{49}\ cm^2$

# Isoceles Right Angled

↳ समकोण समद्विबाहु Δ




(i) परिमाप $= 2x + x\sqrt{2}$

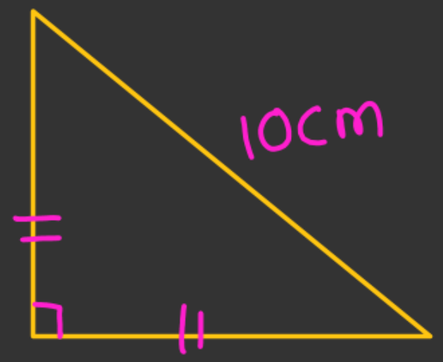
$= x(2+\sqrt{2})$

$= x\sqrt{2}(\sqrt{2}+1)$

(ii) क्षेत्रफल $= \frac{1}{2} \times x \times x = \frac{x^2}{2} = \frac{x^2 \times 2}{2 \times 2} = \frac{(\sqrt{2}x)^2}{4}$

(iii) क्षेत्रफल $= \frac{H^2}{4}$

$= \frac{H^2}{4}$




$\text{Area} = \frac{H^2}{4} = \frac{10^2}{4} = \frac{100}{4} = 25\text{cm}^2$

LCM & HCF