रेल रक्षक भर्ती | MENSURATION 2D | MATHS

Equal sides.

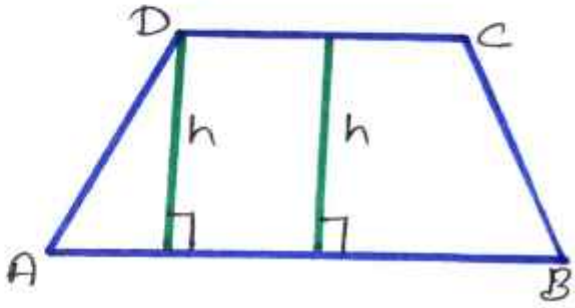
- वर्ग (Square)
- आयत (Rectangle)
- वृत (Circle)
- समचतुर्भुज (Rhombus)
- समान्तर चतुर्भुज (Parallelogram)

opposite sides are equal & parallel.

- समलम्ब चतुर्भुज (Trapezium)

समानांतर

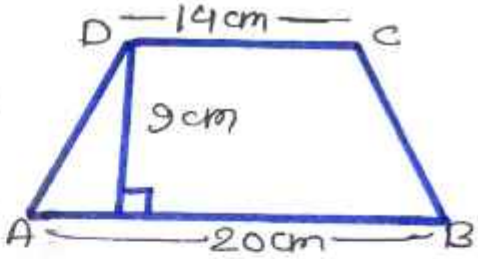
1. AB || CD
2. परिमाप (P) ⇒ AB + BC + CD + DA
3. Area ⇒ $\frac{1}{2}(AB+CD)\times h$



1. Area ⇒ $\frac{1}{2}(20+14)\times 9$

AB = 20 cm
CD = 14 cm.

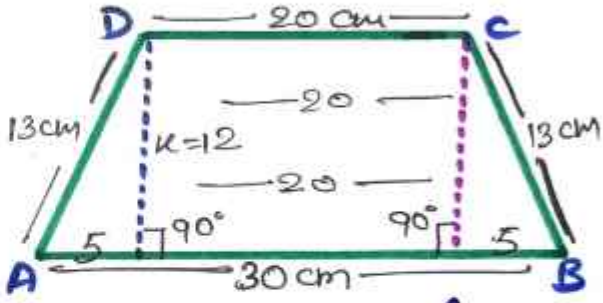
⇒ 17 × 9 ⇒ 153 cm^2

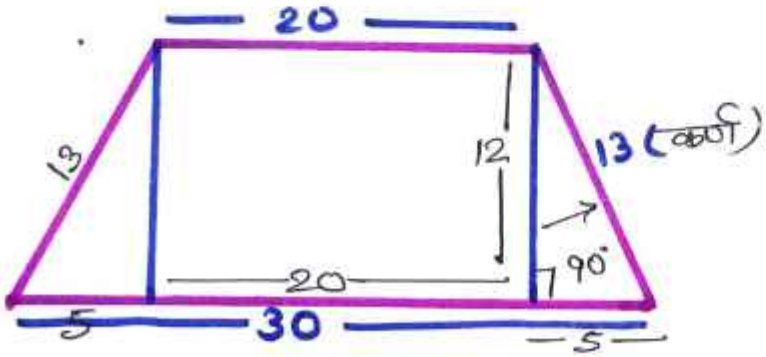


1. ऊँचाई (h) = 12 cm

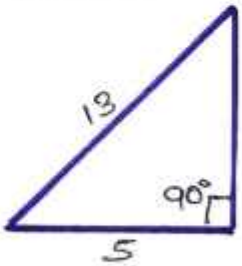
2. Area ⇒ $\frac{1}{2}(30+20)\times 12$

⇒ 300 cm^2





5, 12, 13 Triplet



△ AED

$h = \sqrt{13^2-5^2}$

$\sqrt{169-25}$

$\Rightarrow \sqrt{144} = 12$

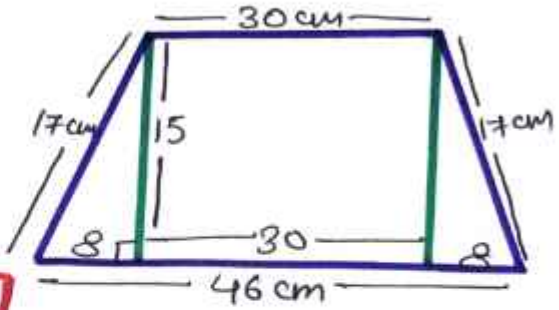
MENSURATION 2D

$h = ? = \boxed{15\ cm}$

Area = ?

$\rightarrow \frac{1}{2}(46+30) \times 15$

$\Rightarrow \frac{38}{\cancel{76}} \times 15 = \boxed{570\ cm^2}$



8, 6, 10

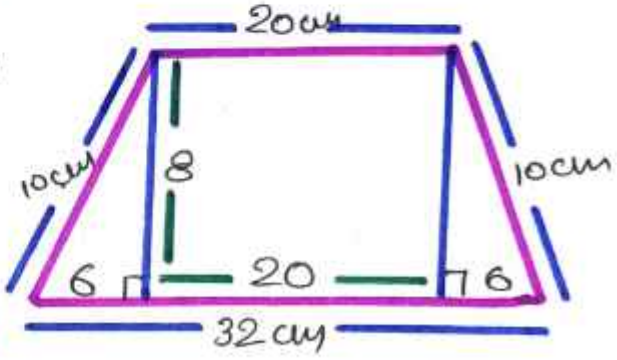
$h = ?$

न्यूनतम दूरी ⇒ 8

Area : ?

$\frac{1}{2}(32+20) \times 8^4$

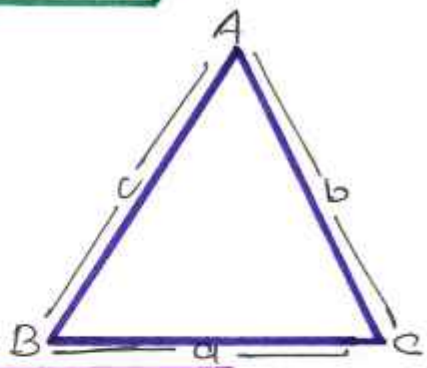
$\Rightarrow 52 \times 4 \Rightarrow \boxed{208\ cm^2}$



(त्रिभुज) TRIANGLE

1. परिमाप (P) ⇒ a+b+c
2. अर्द्धपरिमाप (S) ⇒ $\frac{(a+b+c)}{2}$
3. Area ⇒ $\frac{1}{2} \times$ Base $\times$ height
4. Area ⇒ Hero's Formula ⇒ $\sqrt{S(S-a)(S-b)(S-c)}$

: जहाँ $S = \frac{a+b+c}{2}$



Triangle

(कोणों पर आधारित) Based on angles.

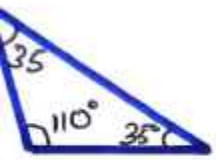
(भुजाओं पर आधारित) Based on sides.



⇒1. न्यूनकोण △ (Acute angle triangle)

1. समबाहु (Equilateral) △

MENSURATION 2D



2. अधिककोण Δ (Obtuse angle Triangle)

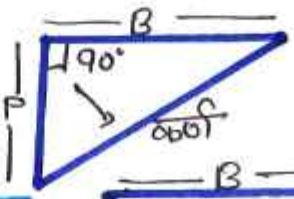
2. विषम बाहु Δ (Scalene Δ)

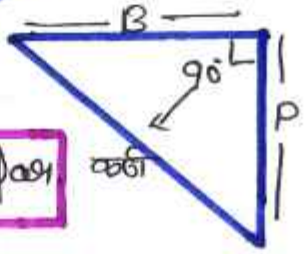
3. समकोण Δ (Right Angle Triangle)

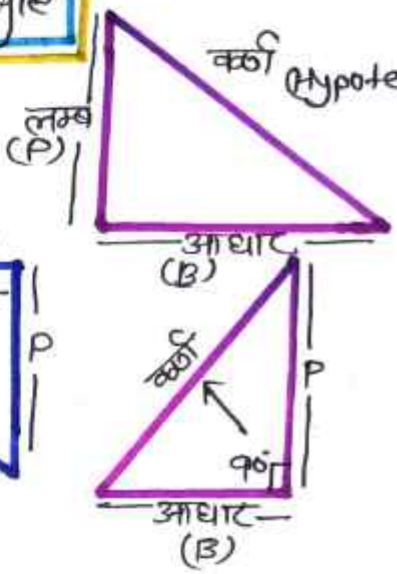
3. सम द्विबाहु Δ (Isosceles Δ)

समकोण Δ (Right Angle Triangle)

कर्ण^2 = लम्ब^2 + आधार^2
(पाइथागोरस का प्रमेय)

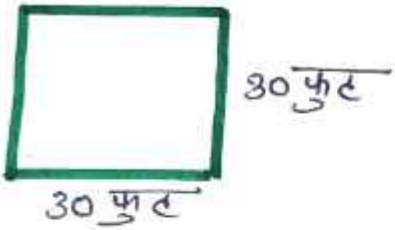






⇒ समकोण Δ परिमाप ⇒ P+B+H

⇒ Area ⇒ $\frac{1}{2}$ × Base × Perpendicular



Area ⇒
= 45 × 20
= 900 फुट^2

गज ⇒ $\frac{900}{9}$ ⇒

⇒ 100 गज

