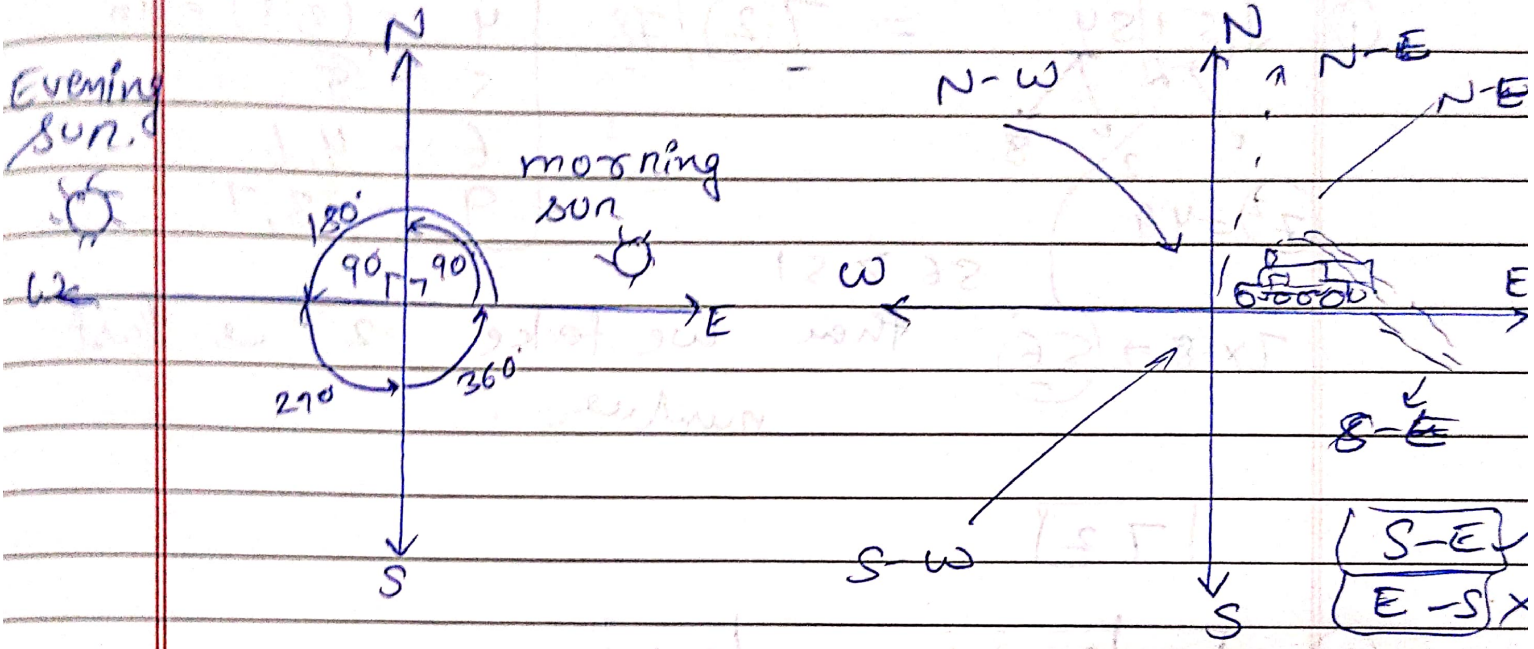
Date: 21/07/25

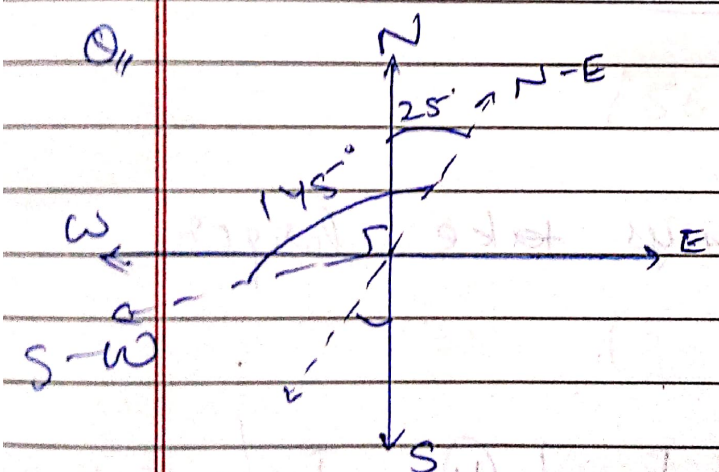
MON TUE WED THU FRI SAT SUN

Rules → ① Notes Copy
② Silence

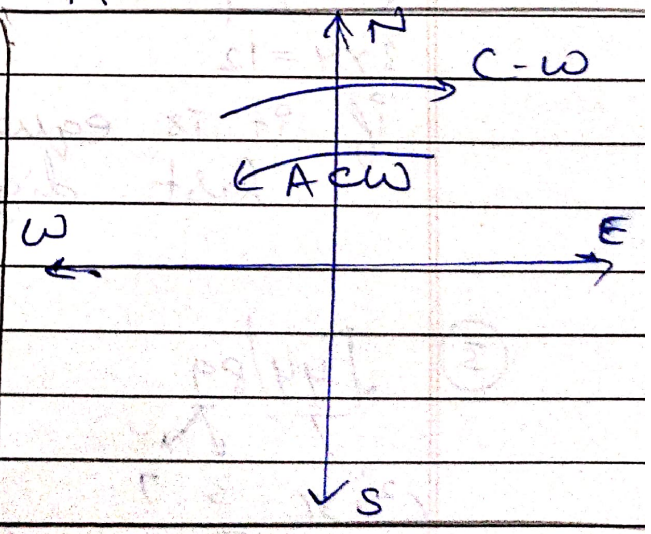
~ Himanshu Sir

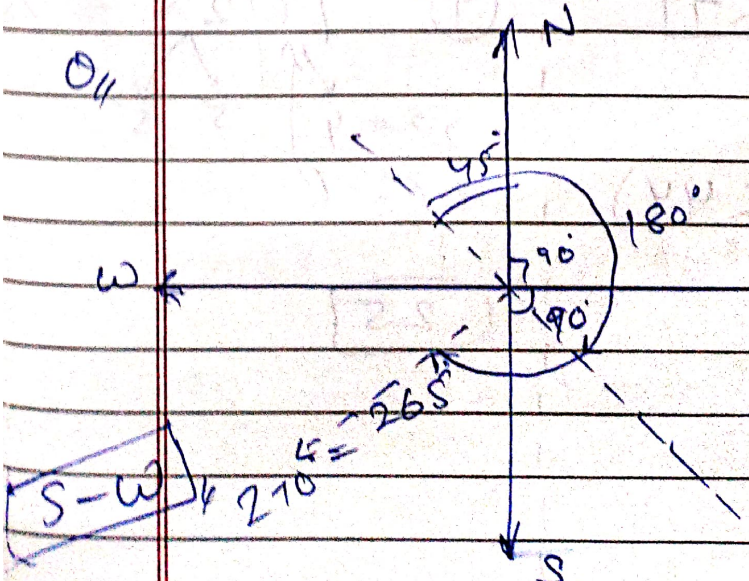
* North direction Sense test *





145° → ACW





265° ≅ 270°

85° ≅ 90°

51 56 58

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Topic → Square Roots

☆ vedic math's method :-

unit	no.
1	- (1,9) = 10
4	- (2,8) = 10
5	- (5)
6	- 4,6
9	- 3,7

① $\sqrt{51|84} = 7(2)|78$

2 8

$7^2 = 49$

$7 \times 8 \Rightarrow (56)$

56 > 51 then we take 2 as last number

72

② $\sqrt{12|96} = 36$

$3^2 = 9$ 4 6

$3 \times 4 = 12$

if it is equal always take larger last digit.

③ $\sqrt{44|89} = 67$

$6^2 = 36$ 3 7

$6 \times 7 = (42) \Rightarrow (42 < 44)$

then, 67

④ $\sqrt{6|25} = 25$ ☆ @

$2^2 = 4$ 5 5

$2 \times 3 = 6$

25

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H.W → 1-31 (square)
1-11 (cube)

★ $(25)^2 \Rightarrow$ 25 → 2×3 ; 5×5 → 625

$(35)^2 \Rightarrow$ 35 → 3×4 ; 25 → 1225

$(45)^2 \Rightarrow$ 45 → 2025 ($4\times5=20$)

$(55)^2 \Rightarrow$ 3025

$(65)^2 \Rightarrow$ 5^2 25

$(75)^2 \Rightarrow$ 56 25

$(85)^2 \Rightarrow$ 72 25

$(95)^2 \Rightarrow$ 9025

★ @ $\sqrt{6724} = 82$ ($80^2 = 6400$)

↓ 2 8

lies b/w 80^2 — 90^2

80 — 82 — 85 — 88 — 90

7225 (7225 > 6724)

ans = 82

in

in

force acted

(b) $\sqrt{5041}$ → 71

$7 \times 7 = 49$

$7 \times 8 = 56$ $(50 < 56)$

(c) $\sqrt{9216}$ = 96

$9 \times 9 = 81$ 4 6

$9 \times 10 = 90$

(d) $\sqrt{3249}$ = 57

$5^2 = 25$ 3 7

$5 \times 6 = 30$

Ex.

One morning shyam is traveling opposite the sun for 10 km, from there he turn to his left, and travel for 15 km, from there he turns his ;-

① left and travel = 5 km

② Right and travel = 5 km

Find → dirⁿ

→ total dist.

→ shortest dist.

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① total dist ⇒ 10 + 15 + 5

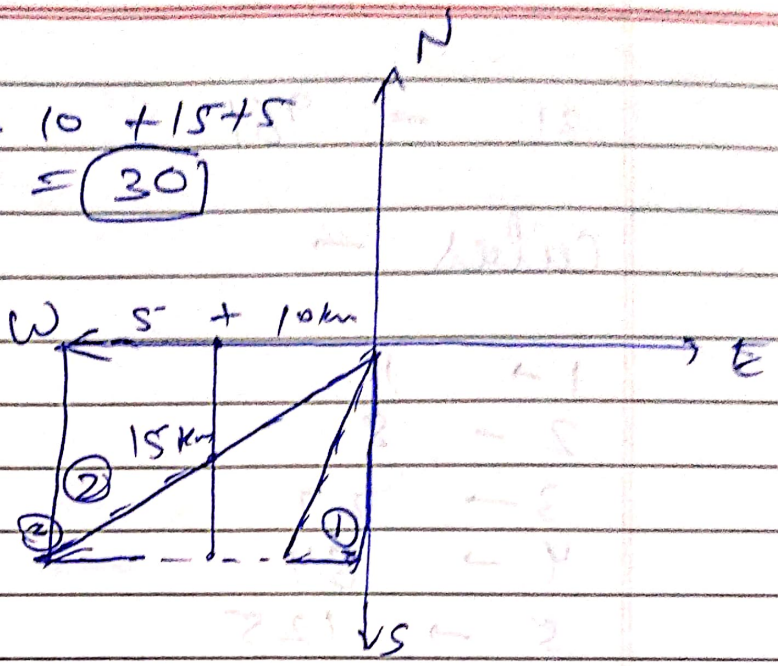
= 30

dir^n → East

shortest →

$\sqrt{15^2+5^2}$

$\Rightarrow \sqrt{250}$



② total = 30

dir^n → West

shortest → $\sqrt{15^2 + 15^2} = \sqrt{225+225}$

$\Rightarrow \sqrt{450}$

28th July. **Homework** (Assesment - 1)

squares.

1 → 1	16 → 256
2 → 4	17 → 289
3 → 9	18 → 324
4 → 16	19 → 361
5 → 25	20 → 400
6 → 36	21 → 441
7 → 49	22 → 484
8 → 64	23 → 529
9 → 81	24 → 576
10 → 100	25 → 625
11 → 121	26 → 676
12 → 144	27 → 729
13 → 169	28 → 784
14 → 196	29 → 841
15 → 225	30 → 900

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31 → 961

cubes →

1 →	1
2 →	8
3 →	27
4 →	64
5 →	125
6 →	216
7 →	343
8 →	512
9 →	729
10 →	1000
11 →	1331

4th Aug. 2025 →

Unit digit method.

% = Per - cent.

1 = 100

$$\boxed{\% = \frac{}{100}}$$

1 $ = 100 cent

$$20\% = \frac{20}{100} = \frac{1}{5}$$ → Total value

$$30\% = \frac{30}{100} = \frac{3}{10}$$

$$25\% = \frac{1}{4}$$

Ka

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Q. eg. If 25% of a no. is added itself then no. change to 500, find the no. ?

⇒ let the no. = x

$$25\% \text{ of } x = \frac{25}{100}x = \frac{1}{4}x$$

$$x + \frac{1}{4}x = 500$$

$$\frac{4x + x}{4} = 500$$

$$\frac{5x}{4} = 500$$

$$\boxed{x = 400}$$

unit digit method → (eazier)

$$25\% = \frac{1}{4} \rightarrow x$$

$$4 + 1 = 500$$

x + 25% of x = 500

$$5 = 500$$

$$1 = 100$$

$$1 \times 4 = 100 \times 4$$

$$\boxed{4} = \boxed{400}$$

4 → x

400 → original value of x

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Q. If 20% of a no is subtracted itself then no. change to 1600, find the no. ?

→ $20\% = \frac{20}{100} = \frac{1}{5} \rightarrow x$

~~$5 - 1 = 1600$~~

$6 = 1600$

~~$1 \longrightarrow 1600$~~

$\frac{1600}{6}$

$5 \longrightarrow \frac{1600}{6} \times 5$

$5 \longrightarrow 266.6 \times 5$

$5 - 1 = 1600$

$4 = 1600$

$1 = 400$

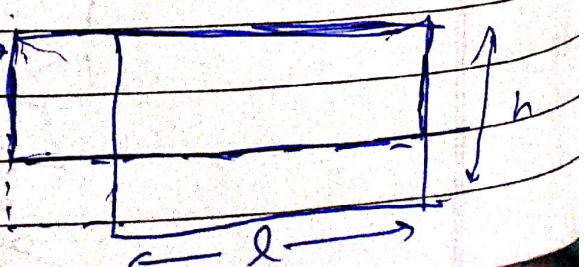
$5 \longrightarrow \boxed{2000}$

eg. 20% ↑ in length of Rectangle and 30% ↓ in height then find % change in Area ?

$$\% \text{ change} = \frac{A_2 - A_1}{A_1} \times 100$$

20% = 1/5

30% = 3/10



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$A_1 = l_1 \times h_1$

$= 5 \times 10$

$= 50$

$A_2 = 6 \times 7$

$= 42$

$\%\ \text{change} = \frac{42 - 50}{50} \times 10^2$

$= -8 \times 2$

$= \boxed{-16\%}$

$\Rightarrow$ 16% decrease in Area

Next class $\rightarrow$ square root (trick) and cube.

A++

11/Aug/25

Cube Roots

$$\boxed{a^{1/3} \pm \frac{b}{3(a)^{2/3}}}$$

Q $\Rightarrow$ $\sqrt[3]{443}$

343 (a) 100 (b)

$(343)^{1/3} + \frac{100}{3 \times (343)^{2/3}}$

$\Rightarrow 7 + \frac{100}{3 \times 49}$

$49 \approx 50$

1099

1000 (a) 99 (b)

perfect cube

$\Rightarrow 7 + \frac{100}{150}$

$7 + 0.6$

$\Rightarrow \boxed{7.6}$ Ans

Q. $\sqrt[3]{1099}$ → 1000 (a)
→ 99 (b)

$10 + \frac{99}{3(1000)^{2/3}}$

$10 + \frac{33}{100}$

$10 + 0.33 = \boxed{10.33}$

Q. $\sqrt[3]{1290}$; $(11)^3 = 1331$

$\sqrt[3]{1331 - 41}$
(a) (b)

$11 - \frac{41}{3 \times (1331)^{2/3}} = 11 - \frac{41}{3 \times 121}$

$\Rightarrow$ ~~11 - 0.81~~ $= \boxed{10.89}$