YAKEEN NEET 2.0

2026

Basic Maths and Calculus (Mathematical Tools)

PHYSICS | Lecture - 01

By- Saleem Ahmed Sir

Topics to be covered

1. Basic trigonometry
2. Angle approximation
3.
4.


@SALEEMSIR_PW

- Have patience.... चिकने घड़े बन जाओ... (1 year)
- Attain all the Class & follow it blindly.
- कोई भी Class छोड़नी नहीं है...
- Last तक टिके रहना है.... मैं भी आपके साथ आपके selection के लिए दुगुनी से ज्यादा मेहनत करते हुए Last तक टिका रहूँगा।
- Notes → Register (2 pen)
  KPP → Register (Rough)

Things I will take care/cover....

- विल्कुल Basic से.... Adv. तक
  - डरना नहीं... if you attend all class you will feel its easy
- Will give you the best...
  - Explanation + Class Content + Notes + KPP + ...
- Notes
- Relevent Content

- NEET PYQ + mains + HCV + JEE Adv. + Easy/med./tough + one liner ques
- $(8^{th} - 9^{th} - 10^{th})$ Class maths जितनी phy. में जरूरत है

Everything

1-2 days की चीज नहीं है
Luv

Problem's of majority neet students...

We need to workout on these....

- Concept Understanding
- Fear from Physics
- Calculation, time saving Calculation
- Speed ✓
- Accuracy ✓..
- Medium & tough ques. ✓

* Notes ⟶ ?
* Material ⟶ ?

10 जगह हाथ-पैर मारने की बजाय .... stick to only thing & dats .... KPP

समी का एक ही solution ..... KPP ⟶ Kaddu Practice paper
(For Neet)

- Calculation वाले ques
- speed & accuracy बढ़ाने वाले ques ⟶ KPP ⟶ Level basic, 1, 2, 3 ....
  (HCV + JM + J.A. + NEET + NEERT)
- A/R, True/False वाले ques
- Silly mistakes, deep understanding, critical thinking, Language problem etc
  (NCERT)

⟶ All at one place ... KPP ⟶ I will Discuss by myself.

NEET 2025

* Ques ⟶ 45

22.

Tried 20-25 ques in (45-60 mint)

But 10-12 ques attempt

8-9 correct

3-4 incorrect

effectively ?

~ 30

* Only physics अच्छा कर लेने से तुम्हारा selection नहीं होगा

आपको chem/Zoo/Bot. में भी खूब मेहनत करनी पड़ेगी

Selection भी करवाएंगे . . . Rank भी दिलवाएंगे

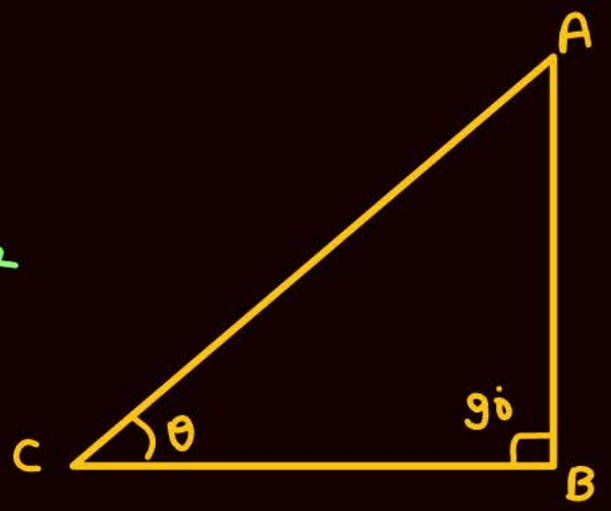
① 7^{th} - 8^{th} - 9^{th} - 10^{th} ⟶ गुणा भाग × ÷

74% ≡ आता है ↑

26% नहीं आता है ↓

Pythagoras theorem

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



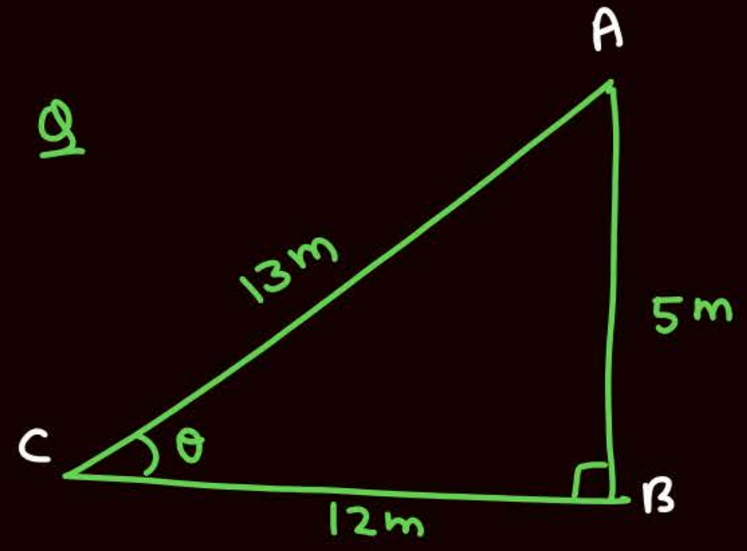
$\sin\theta = \frac{AB}{AC} = \frac{\text{Perpendicular}}{\text{hypot.}}$

$\cos\theta = \frac{BC}{AC}$

$\tan\theta = \frac{AB}{BC}$

CKL

Q



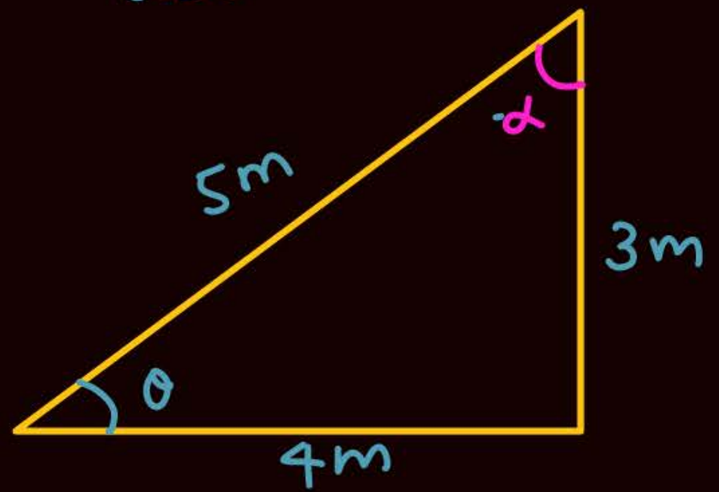
$\sin\theta = \frac{5}{13}$

$\cos\theta = \frac{12}{13}$

$\tan\theta = \frac{5}{12}$

$$\tan\theta = \frac{\sin\theta}{\cos\theta}$$

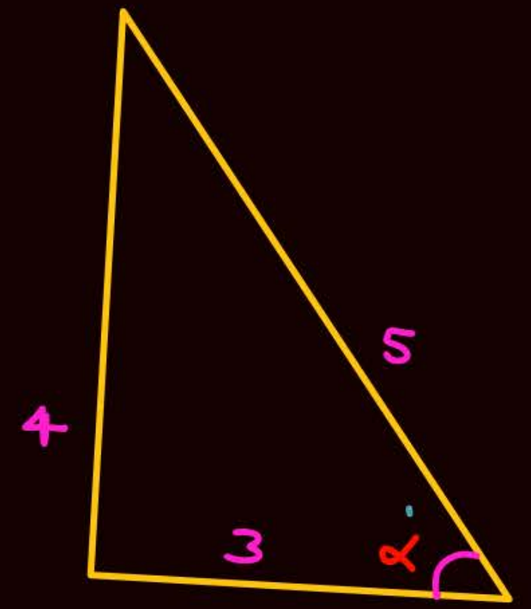
Q



$$\sin\theta = \frac{3}{5}$$

$$\cos\theta = \frac{4}{5}$$

$$\tan\theta = \frac{3}{4}$$



$$\sin\alpha = \frac{4}{5}$$

$$\cos\alpha = 3/5$$

$$\tan\alpha = \frac{4}{3}$$

$$20 \times \frac{4}{5} = ?$$

. .

.

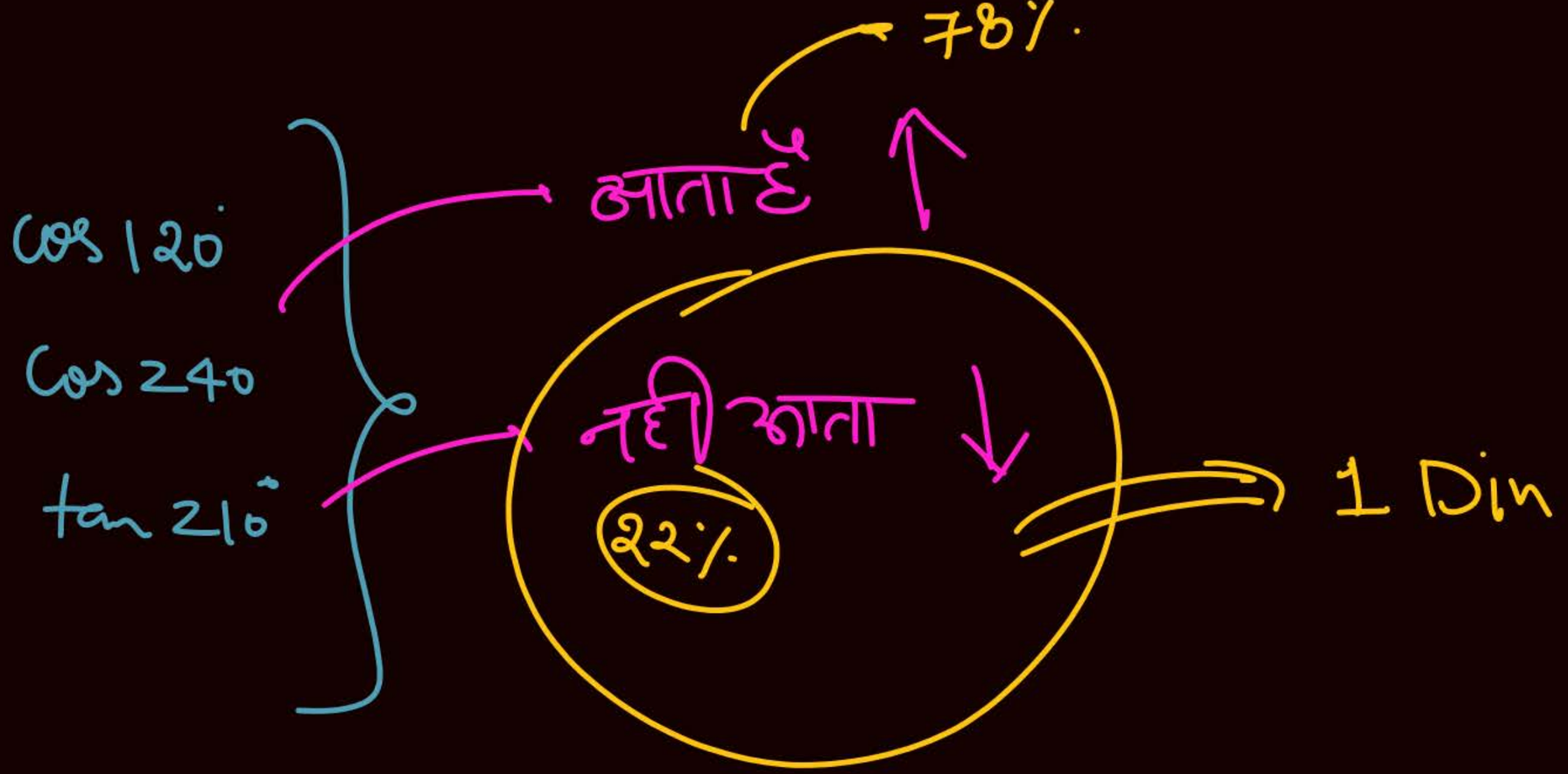
याद करके रखना

$\sin 0^\circ = 0$	$\sin 30^\circ = \frac{1}{2}$	$\sin 45^\circ = \frac{1}{\sqrt{2}}$	$\sin 60^\circ = \frac{\sqrt{3}}{2}$	$\sin 90^\circ = 1$
$\cos 0^\circ = 1$	$\cos 30^\circ = \frac{\sqrt{3}}{2}$	$\cos 45^\circ = \frac{1}{\sqrt{2}}$	$\cos 60^\circ = \frac{1}{2}$	$\cos 90^\circ = 0$
$\tan 0^\circ = 0$	$\tan 30^\circ = \frac{1}{\sqrt{3}}$	$\tan 45^\circ = 1$	$\tan 60^\circ = \sqrt{3}$	$\tan 90^\circ \to \infty$ Not Def.

$\tan\theta = \frac{\sin\theta}{\cos\theta}$

94% ✓

6% X

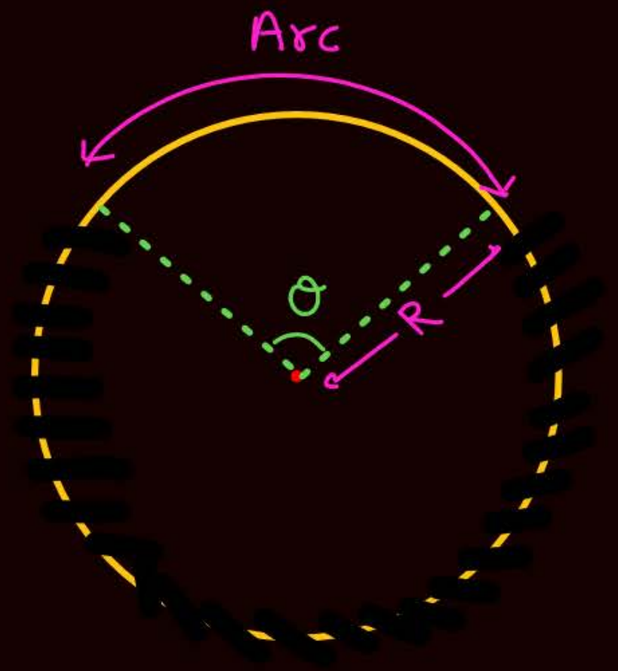

78%
आता है
cos 120°
Cos 240
tan 210°
नहीं आता
22%
1 Din

Angle

$$\theta = \frac{\text{Arc length}}{\text{Radius}}$$

↓

radian (rad)

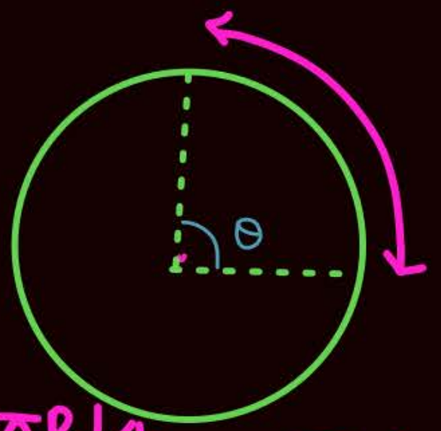


Q

$$\theta = \frac{\text{arc}}{\text{Radius}} = \frac{2\pi R/2}{R} = \frac{2\pi}{2} = \pi$$

$\theta = \pi$ radian

Q



$$\theta = \frac{\text{arc}}{R} = \frac{2\pi R/4}{R} = \frac{\pi}{2}(\text{rad})$$

SKC

चुपचाप π की जगह 180° रख दे

Conversion from radian to degree

$\frac{3\pi}{2}$ rad $\longrightarrow$ $\frac{3 \times 180}{2} = 270°$

$\frac{4\pi}{3}$ rad $\longrightarrow$ $\frac{4 \times 180}{3} = 240°$

$\frac{7\pi}{6}$ rad $\longrightarrow$ $\frac{7 \times 180}{6} = 210°$

$\frac{\pi}{3} \longrightarrow \frac{180}{3} = 60^\circ$

$\frac{\pi}{2} \longrightarrow \frac{180}{2} = 90^\circ$

$\frac{5\pi}{2} \longrightarrow \frac{5 \times 180}{2} = 450^\circ$

$\frac{\pi}{4} \longrightarrow \frac{180}{4} = 45^\circ$

$\frac{7\pi}{4} \longrightarrow \frac{7 \times 180}{4} = 7 \times 45^\circ = 315^\circ$

$\frac{3\pi}{4} \longrightarrow \frac{3 \times 180^\circ}{4} = 135^\circ$

$\pi \longrightarrow 180$

$2\pi \longrightarrow 2 \times 180 = 360^\circ$

Conversion of degree into radian ≡ चुपचाप $\frac{\pi}{180}$ से multiply कर दो

$60^\circ \longrightarrow 60 \times \frac{\pi}{180} = \frac{\pi}{3}$ rad

$120^\circ \longrightarrow 120 \times \frac{\pi}{180} = \frac{2\pi}{3}$ rad.

$90^\circ \longrightarrow 90 \times \frac{\pi}{180} = \frac{\pi}{2}$ rad.

$45^\circ \longrightarrow \frac{45 \times \pi}{180} = \frac{\pi}{4}$ rad

$240^\circ \longrightarrow 240\frac{\pi}{180} = \frac{4\pi}{3}$

$90^\circ \longrightarrow 90 \times \frac{\pi}{180} = \frac{\pi}{2}$

$2^\circ \longrightarrow 2\frac{\pi}{180} = \frac{\pi}{90}$ rad

$3^\circ \longrightarrow 3 \times \frac{\pi}{180} = \frac{\pi}{60}$ rad

$30^\circ \longrightarrow 30 \times \frac{\pi}{180} = \frac{\pi}{6}$

$20^\circ \longrightarrow \frac{20\,\pi}{180} = \frac{\pi}{9}$

Small angle approximation

$\Rightarrow \sin\theta \approx \theta$ (if θ is very small)

θ → radian

(Approx. Equal) $\theta < 5^\circ \longrightarrow$ Best

SKC

$\sin\theta \approx \theta$

30°

$\Rightarrow$ बराबर तो $\theta = 0$ पर होंगे

Homework

Revise today's lecture

THANK YOU