

YAKEEN NEET 2.0

2026

Basic Maths and Calculus (Mathematical Tools)

Physics

Homework Solution-05 (of Lec-09)

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HW solution



Question

If $y = 2^x$. Draw graph between y and x

$$y = 2^x$$

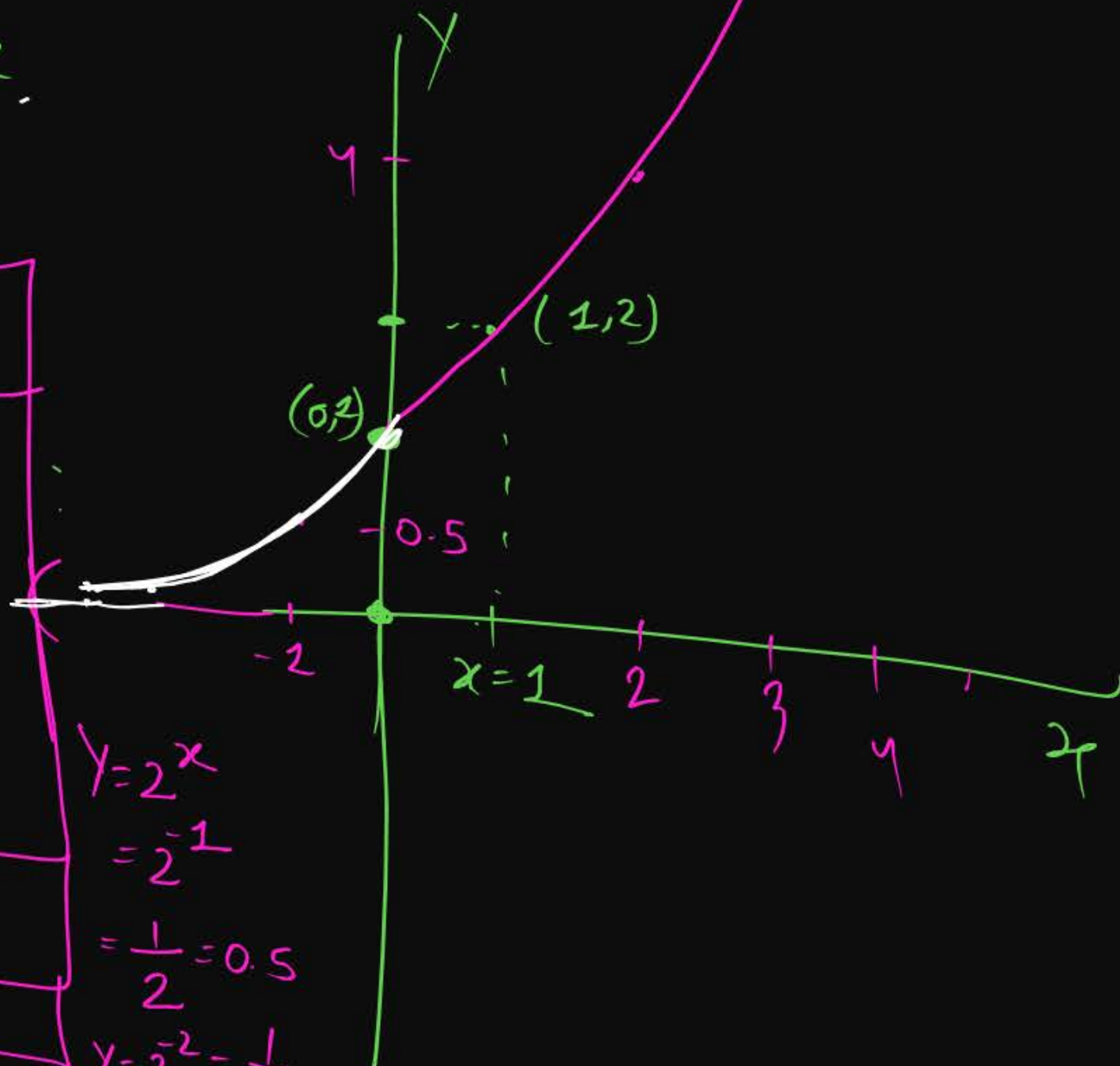
x	y
1	0
2	1
4	2
8	3
16	4
0.5	-1
0.25	-2

$$y = 2^x$$

$$= 2^{-1}$$

$$= \frac{1}{2} = 0.5$$

$$y = 2^{-2} = \frac{1}{4}$$



$$y = 3x + 4 \rightarrow \text{straight line}$$

$$y = x^2 = \text{Parabola}$$

$$y = \sin x \rightarrow$$

$$y = \frac{1}{x} \text{ Rec. hyperbola. n/w}$$

$$x^2 + y^2 = R^2 \rightarrow \text{circle}$$

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1 \rightarrow \text{ellipses}$$

$$y = 2^{-10}$$

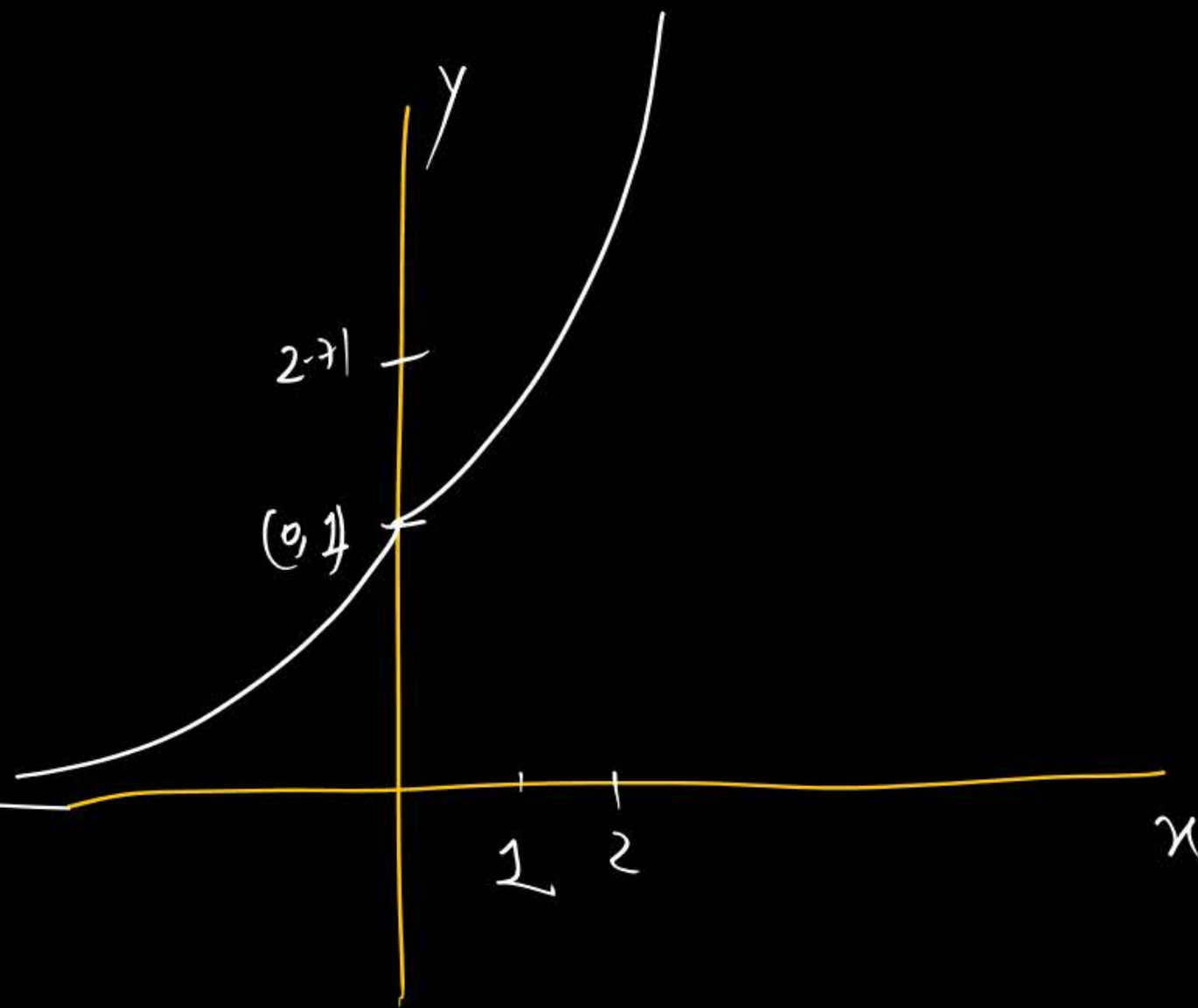
$$y = 2^{-4}$$

$$y = 2^{-8}$$

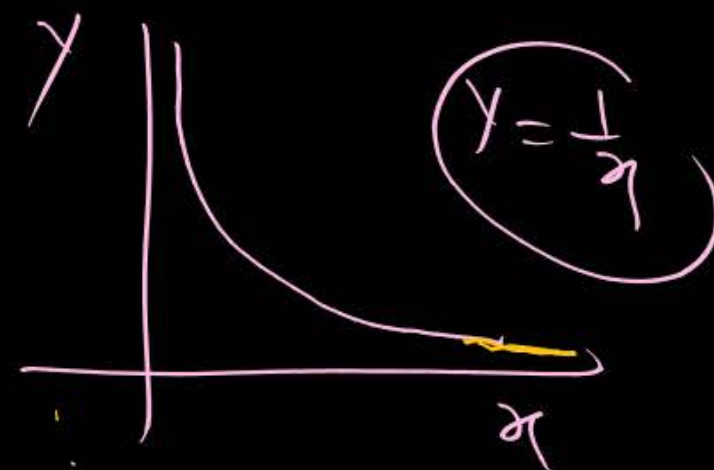
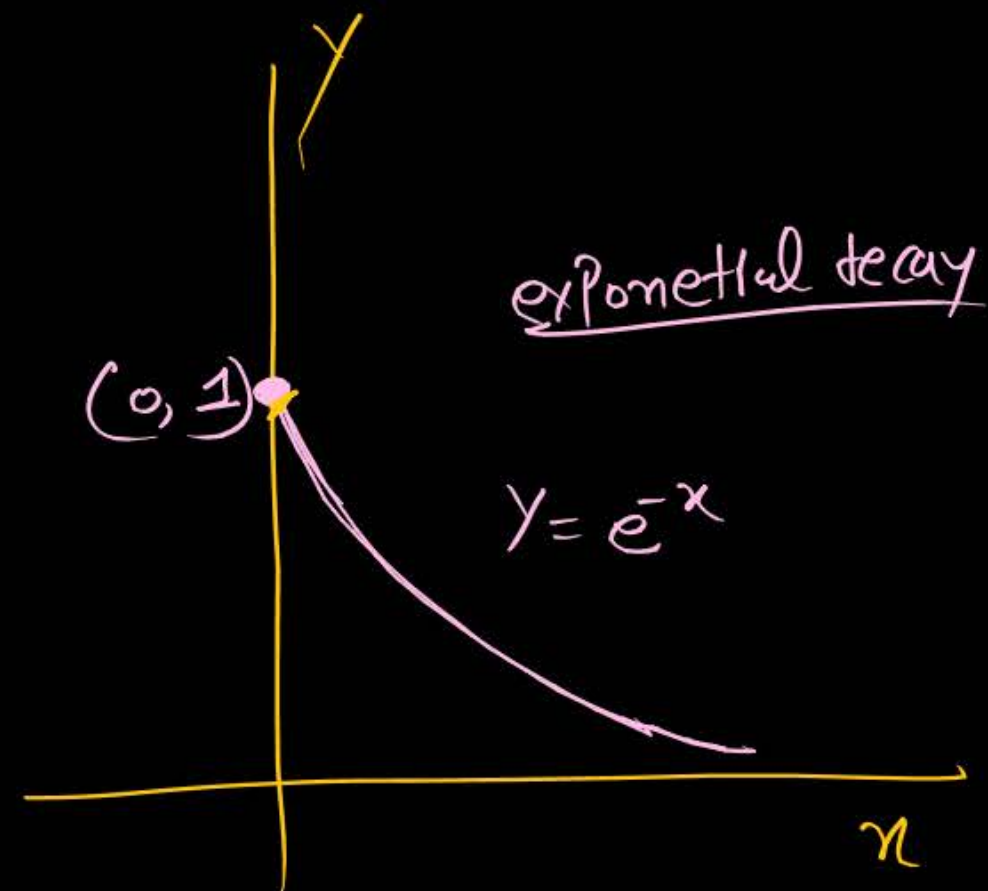
$$y = e^x$$

$$y = (2.71)^x$$

x	x
1	0
2.71	1



$$y = e^{-x} = e^{-1} = \frac{1}{e}$$

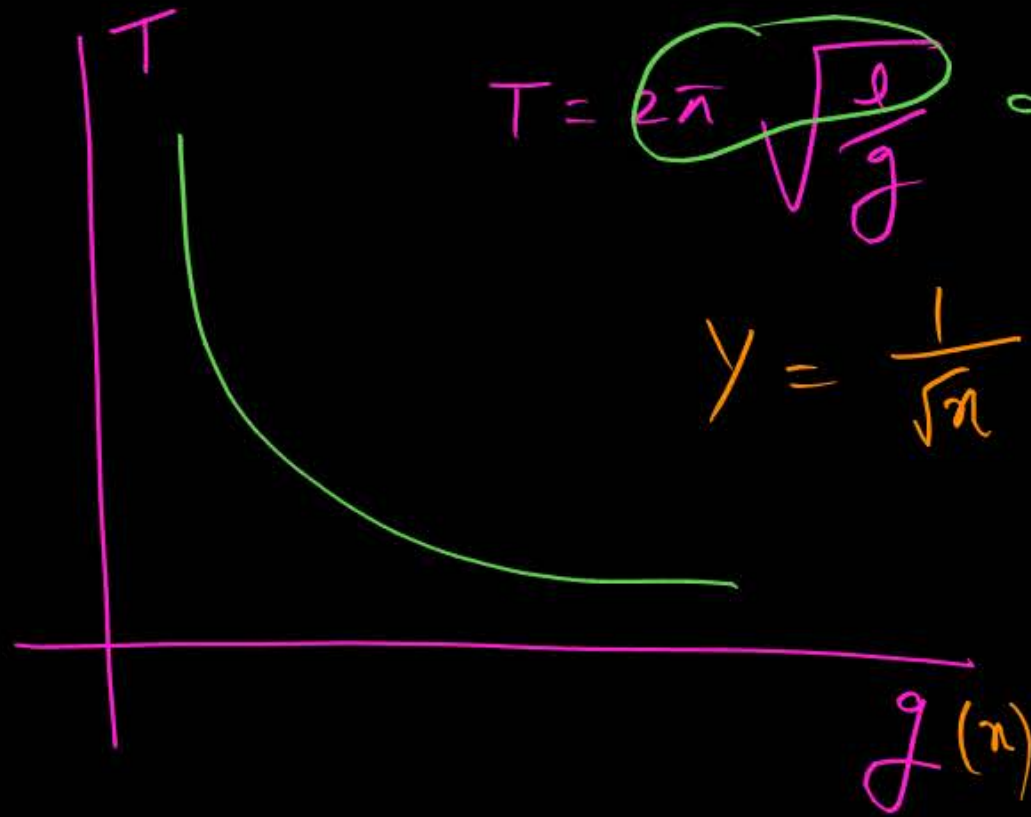


gf $T = 2\pi \sqrt{\frac{l}{g}}$

Draw graph b/w

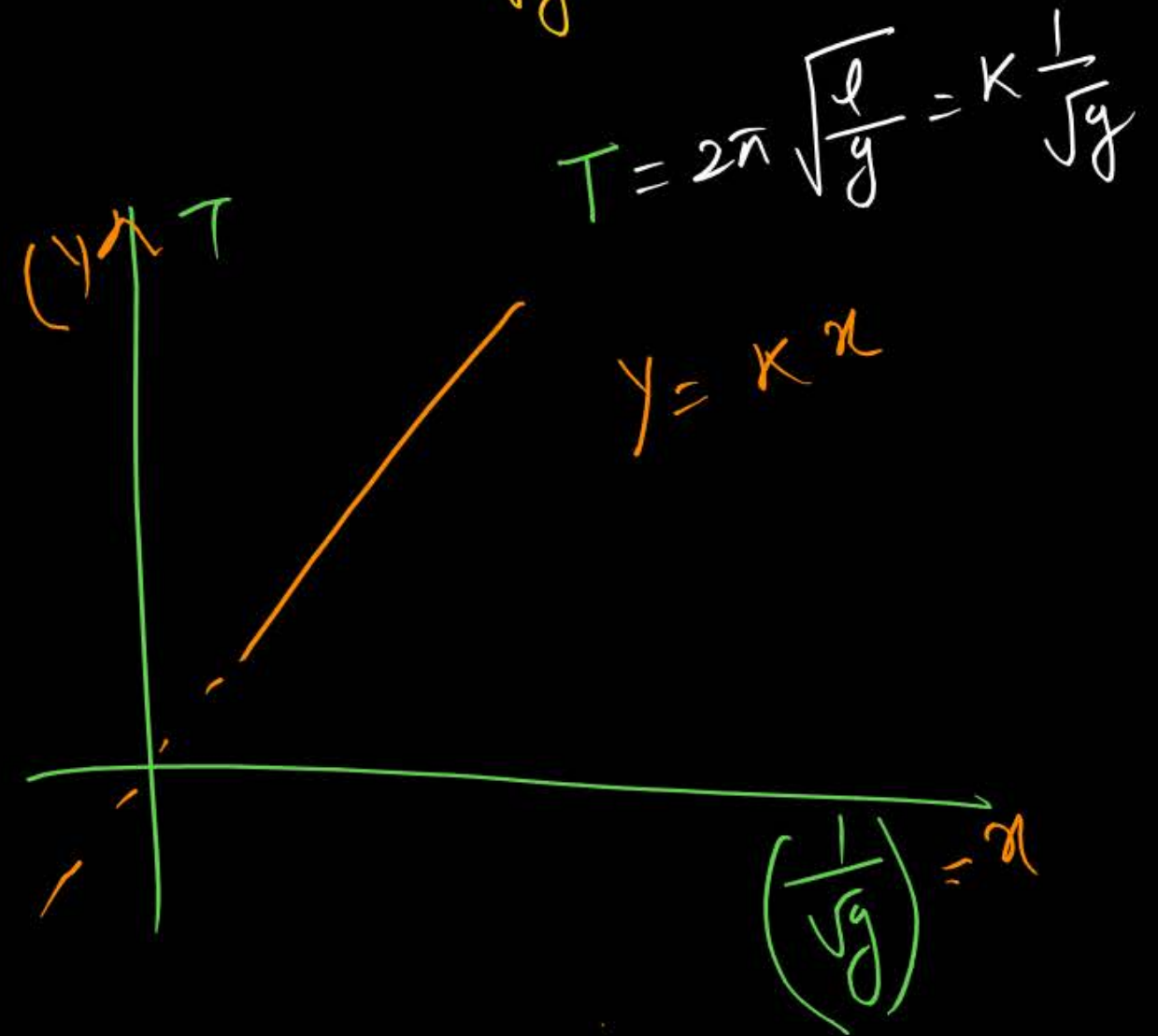
(i) T vs g

(ii) T vs $\frac{1}{\sqrt{g}}$



$T = 2\pi \sqrt{\frac{l}{g}} \propto \frac{1}{\sqrt{g}}$

$y = \frac{1}{\sqrt{x}}$

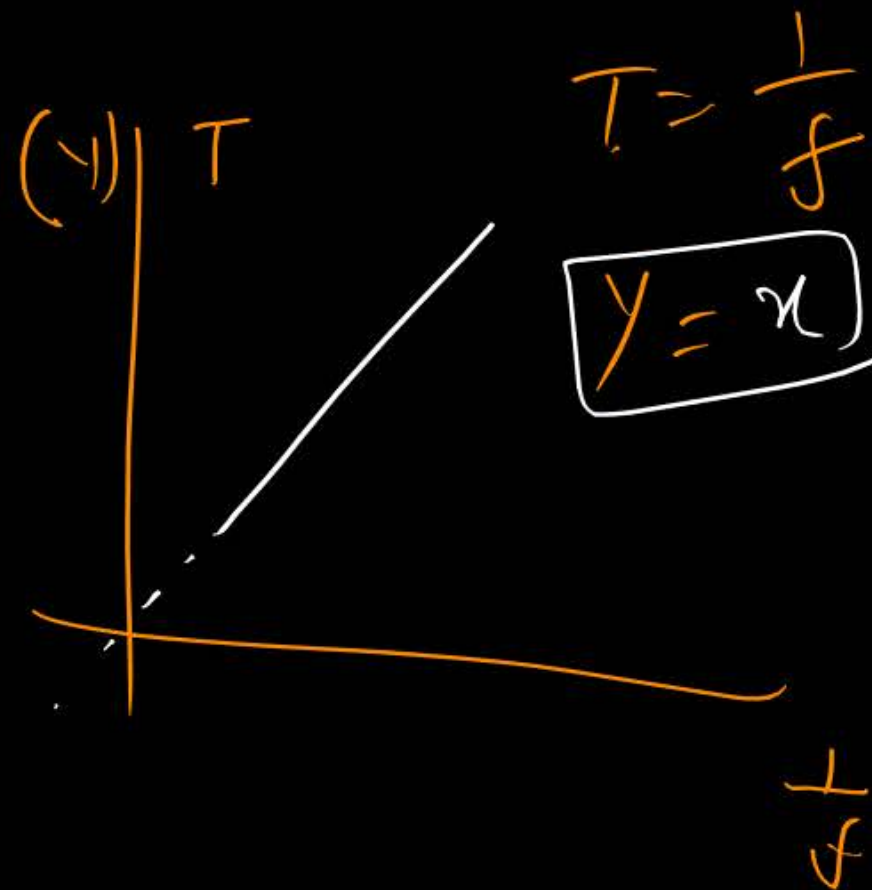
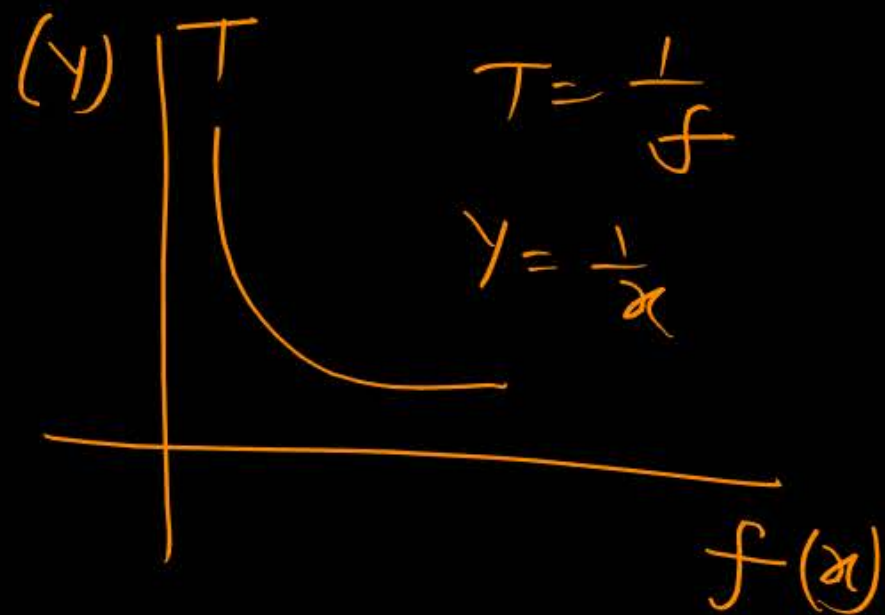


$T = 2\pi \sqrt{\frac{l}{g}} = k \frac{1}{\sqrt{g}}$

gf $T = \frac{1}{f}$ Draw graph B/w

(i) $T \propto f$

(ii) $T \propto \frac{1}{f}$



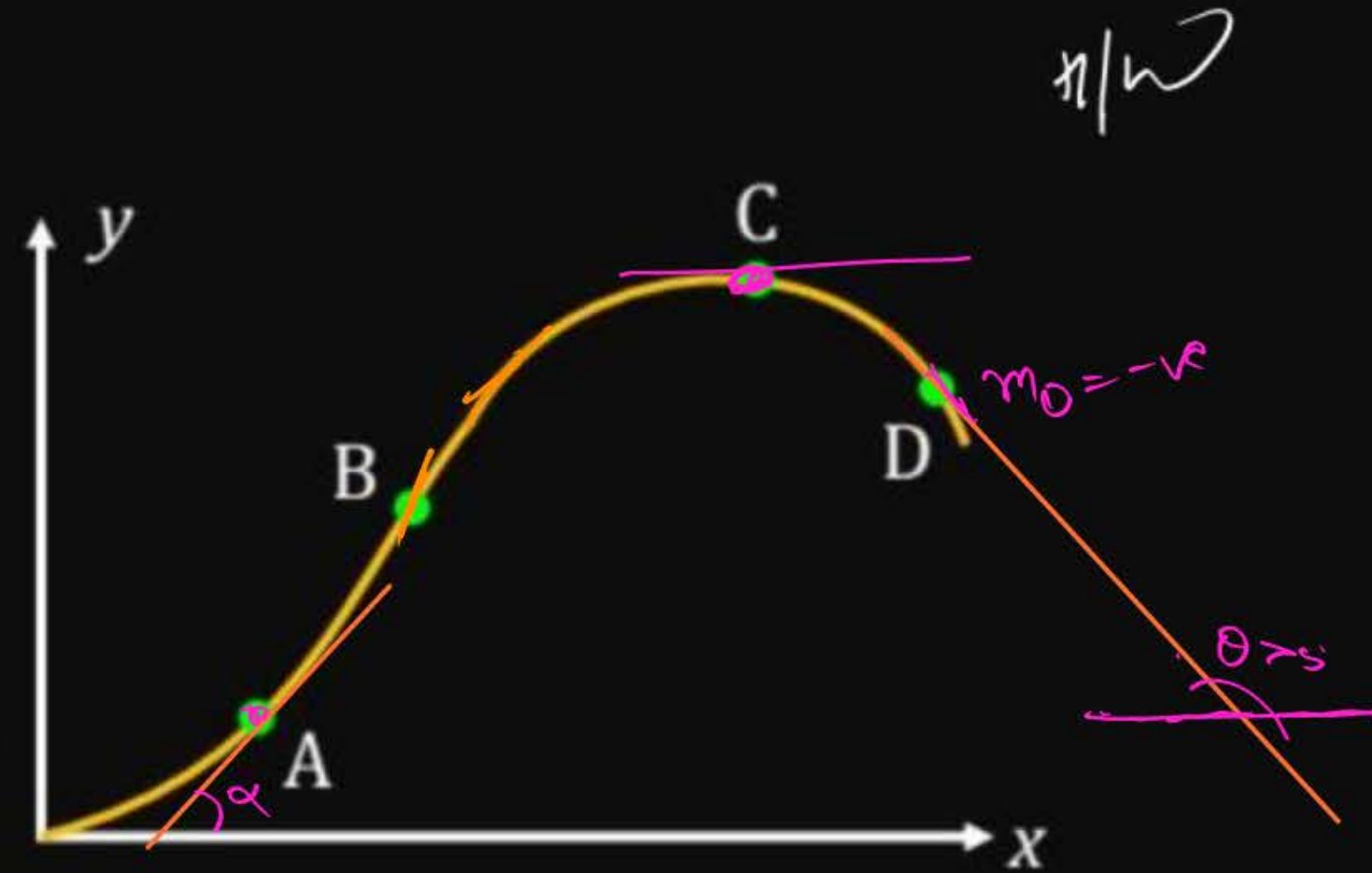
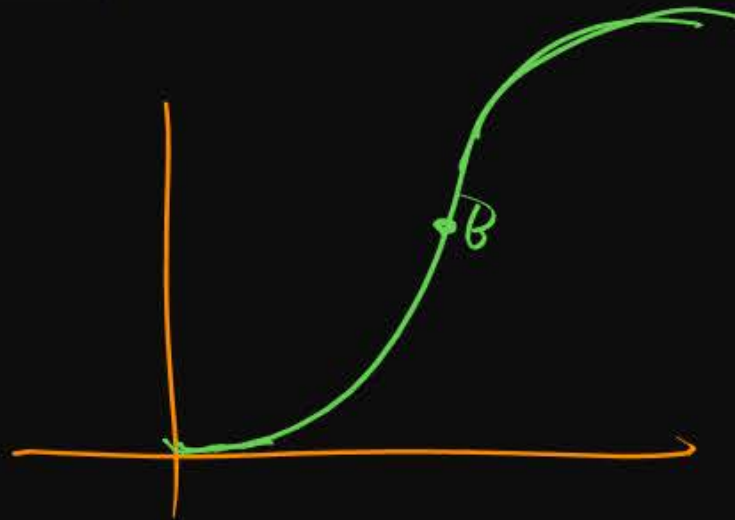
Question

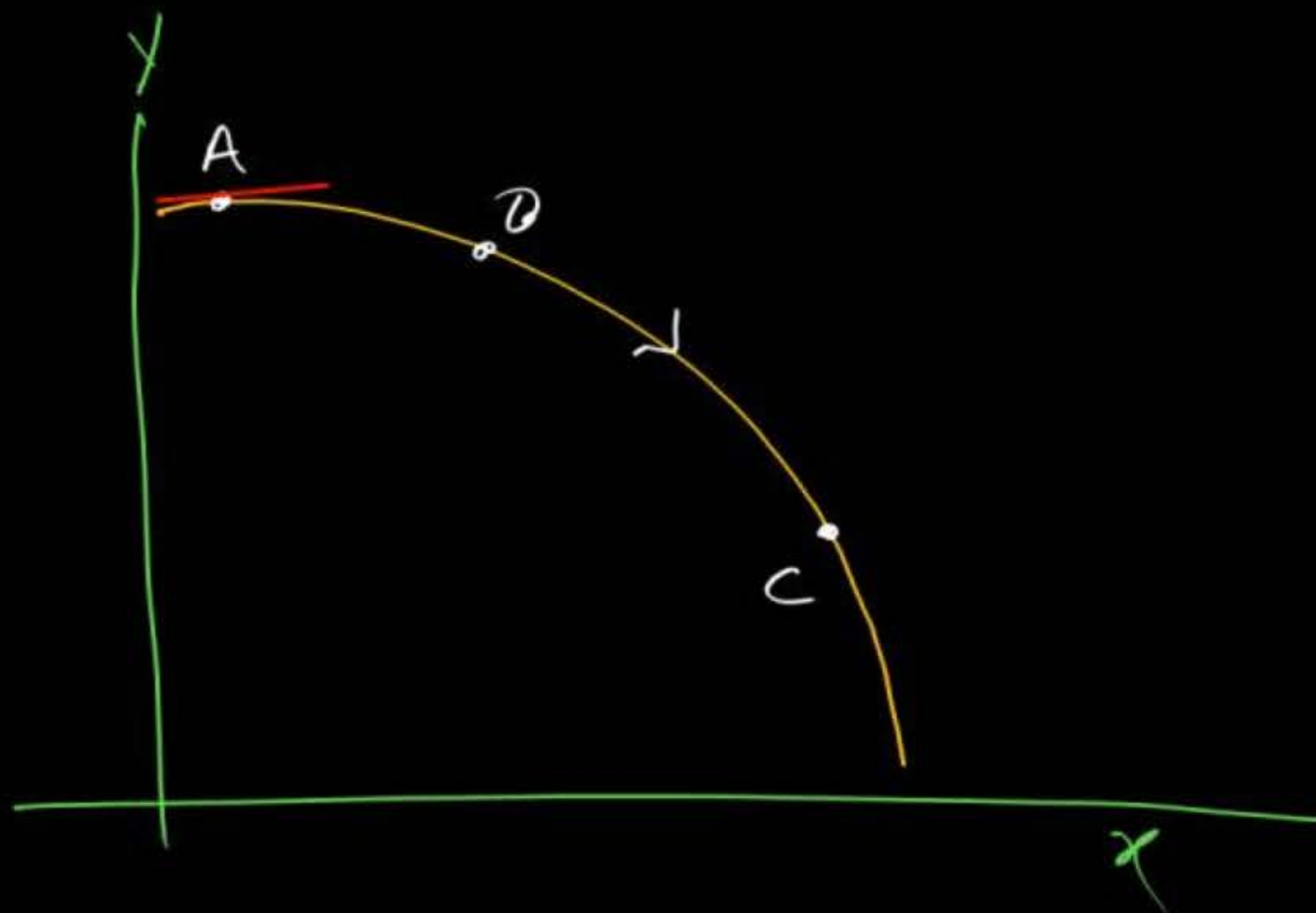


Match the matrix:

Point	Slope
A	Zero
B	negative
C	Maximum
D	Positive

Best pos





H/w

$$m_A =$$

next class

THANK
YOU