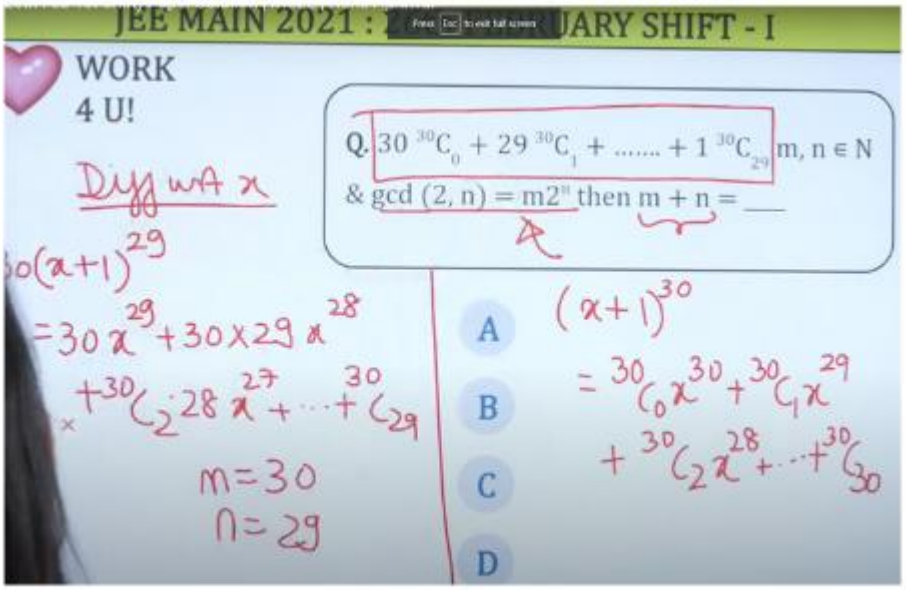
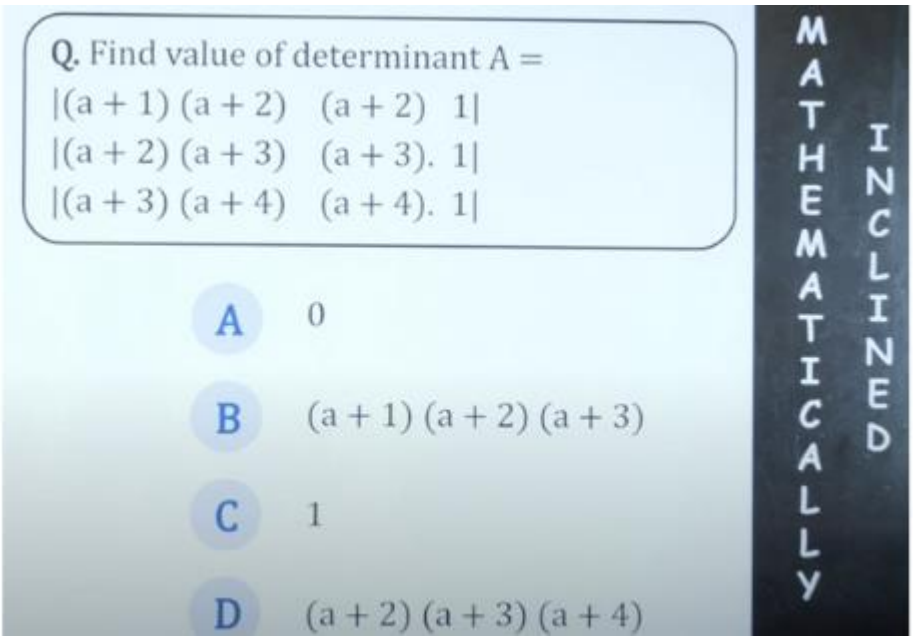
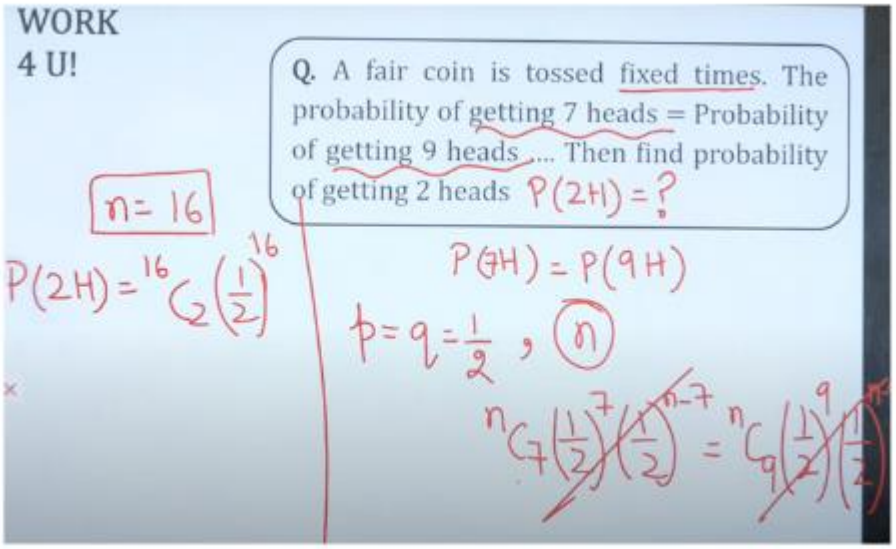
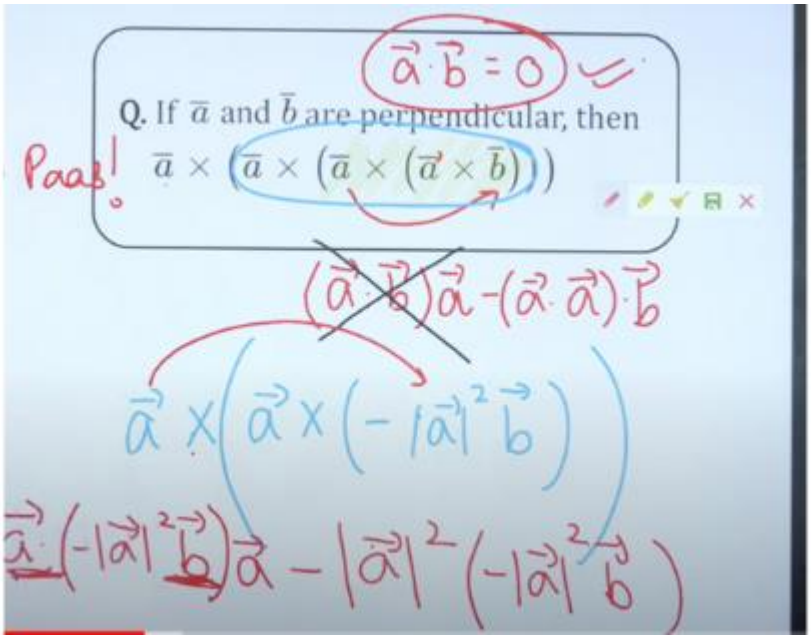
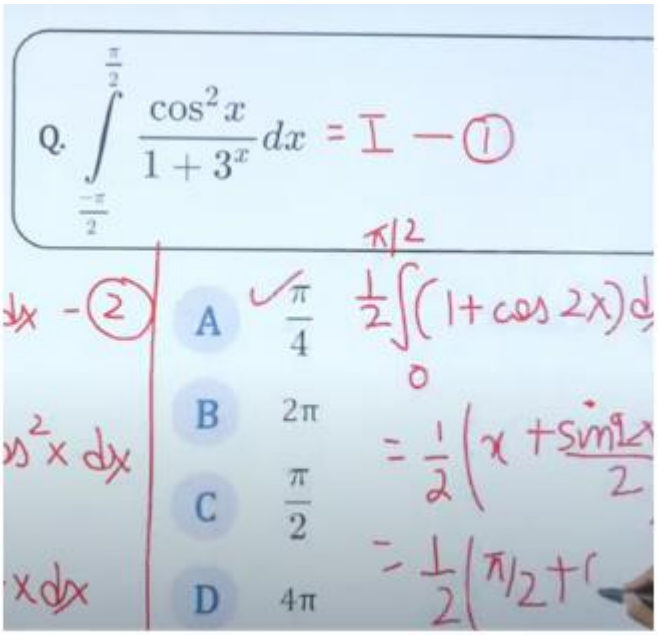
JEE Main 26th Feb Shift 1 Mathematics Memory-Based Questions – by Mathematically Inclined YouTube Channel

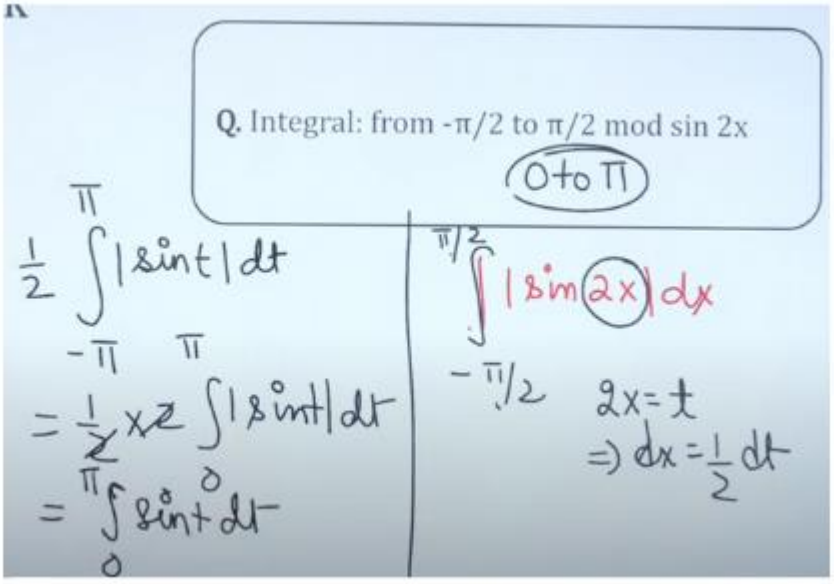


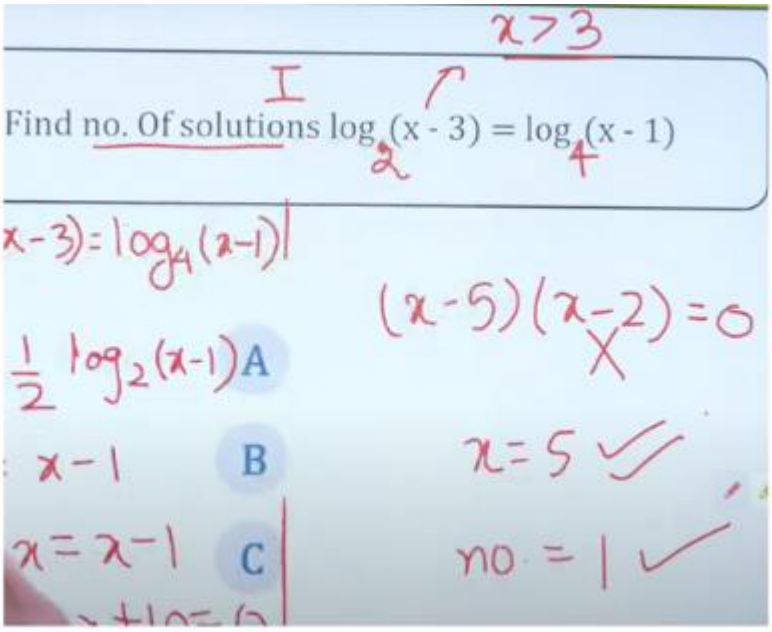



WORK
4 U!
Q. A fair coin is tossed fixed times. The probability of getting 7 heads = Probability of getting 9 heads .... Then find probability of getting 2 heads P(2H) = ?
n = 16
P(2H) = 16C2 (1/2)^16
P(7H) = P(9H)
p = q = 1/2 , n
nC7 (1/2)^7 (1/2)^(n-7) = nC9 (1/2)^9 (1/2)^(n-9)


a · b = 0
Q. If a and b are perpendicular, then
a × (a × (a × (a × b)))
Pass!
(a · b) a - (a · a) b
a × (a × (-|a|² b))
a · (-|a|² b) a - |a|² (-|a|² b)


Q. $\int_{\frac{-\pi}{2}}^{\frac{\pi}{2}} \frac{\cos^2 x}{1+3^x} dx = I - (1)$
A $\frac{\pi}{4}$
B 2π
C $\frac{\pi}{2}$
D 4π
$\frac{1}{2}\int_0^{\pi/2}(1+\cos 2x)d$
$= \frac{1}{2}\left(x + \frac{\sin 2x}{2}\right.$
$= \frac{1}{2}(\pi/2 + r$


Q. Integral: from -π/2 to π/2 mod sin 2x
0 to π
$\frac{1}{2}\int_{-\pi}^{\pi} |\sin t| dt$
$= \frac{1}{2} \times 2 \int_0^{\pi} |\sin t| dt$
$= \int_0^{\pi} \sin t \, dt$
$\int_{-\pi/2}^{\pi/2} |\sin(2x)| dx$
$2x = t$
$\Rightarrow dx = \frac{1}{2} dt$



More Questions will be Added Soon

JEE Main 2021 Paper 1 (B.Tech) Answer Key	**JEE Main Rank Predictor 2021**	**What is a Good Score in JEE Main?**