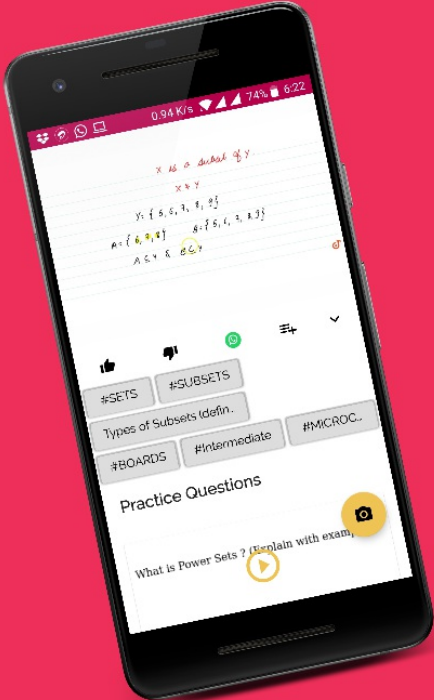


Ques No.	Question
1	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.1 - Q 1 Find an anti derivative (or integral) of the following functions by the method of inspection. $\sin 2x$ ▶ Watch Free Video Solution on Doubtnut
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3	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.1 - Q 3 Find an anti derivative (or integral) of the following functions by the method of inspection. e^{2x} ▶ Watch Free Video Solution on Doubtnut
4	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.1 - Q 4 Find an anti derivative (or integral) of the following functions by the method of inspection. $(ax + b)^2$ ▶ Watch Free Video Solution on Doubtnut
5	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.1 - Q 5 Find an anti derivative (or integral) of the following functions by the method of inspection. $\sin 2x - 4e^{3x}$ ▶ Watch Free Video Solution on Doubtnut

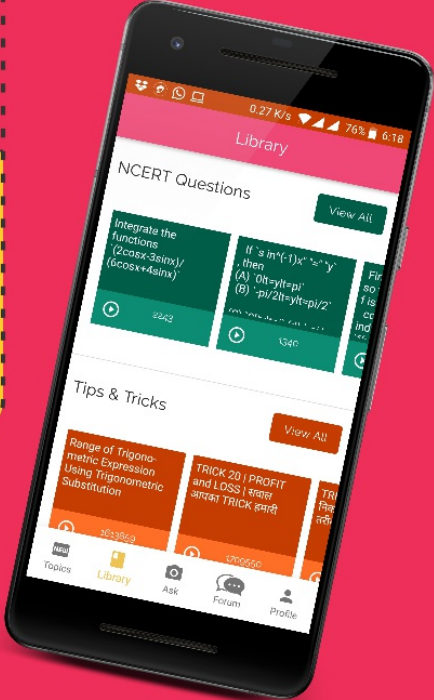


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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.1 - Q 6

Find the integral $\int(4e^{3x} + 1)dx$

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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.1 - Q 7

Find the integral $\int x^2\left(1 - \frac{1}{x^2}\right)dx$

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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.1 - Q 8

Find the integral $\int(ax^2 + bx + c)dx$

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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.1 - Q 9

Find the integral $\int(2x^2 + e^x)dx$

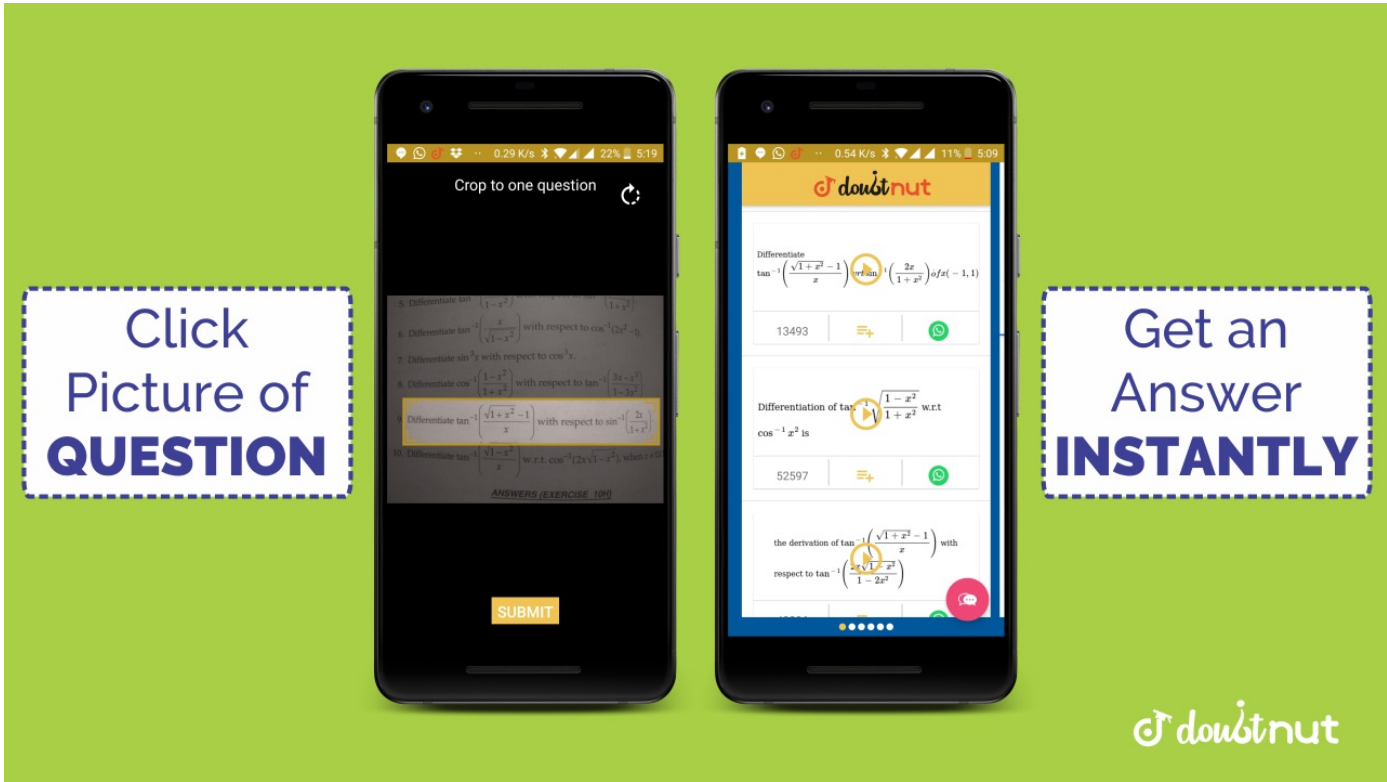
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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.1 - Q 10

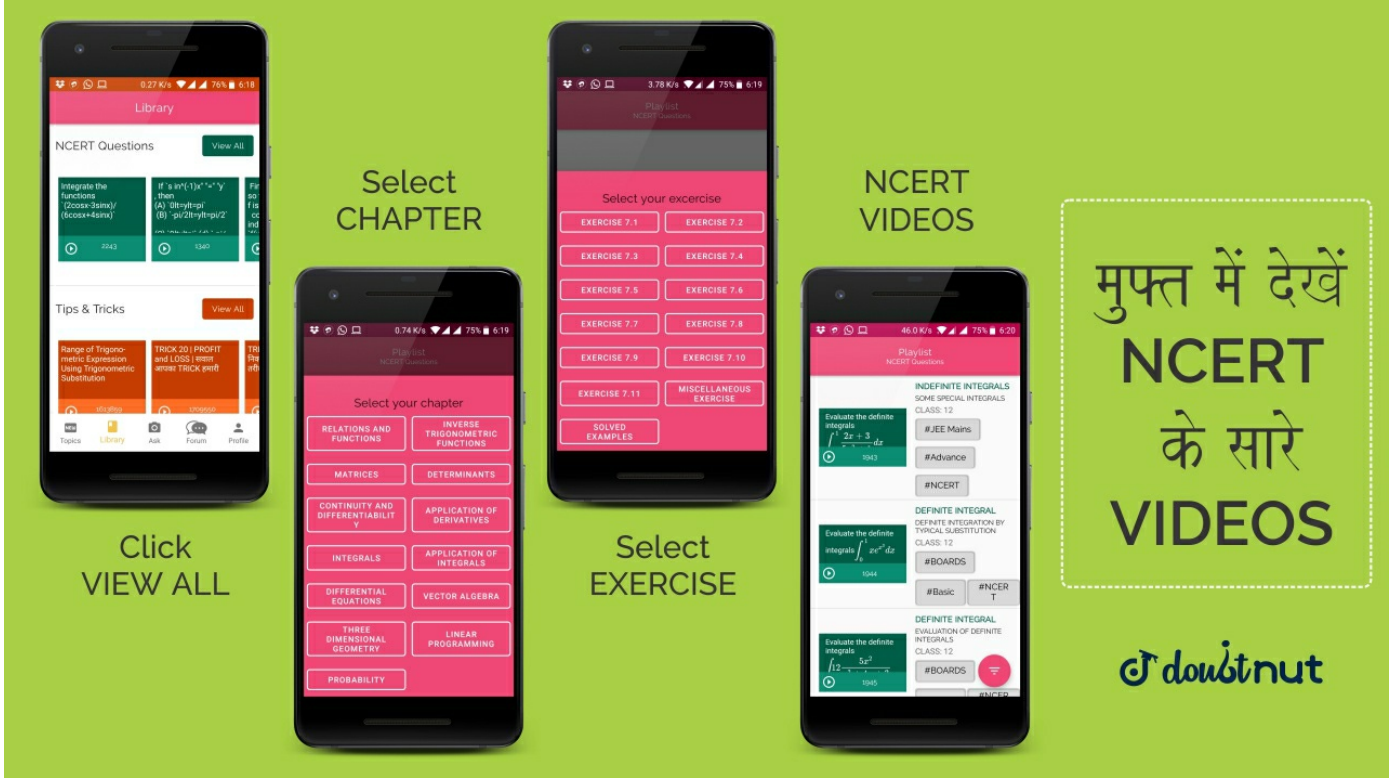
Find the integral $\int\left(\sqrt{x} - \frac{1}{\sqrt{x}}\right)^2dx$

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11	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.1 - Q 11 Find the integral $\int \frac{x^3 + 5x^2 - 4}{x^2} dx$ ▶ Watch Free Video Solution on Doubtnut
	
12	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.1 - Q 12 Find the integral $\int \frac{x^3 + 3x + 4}{\sqrt{x}} dx$ ▶ Watch Free Video Solution on Doubtnut
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19	Find the integral $\int \frac{\sec^2 x}{\cos ec^2 x} dx$ 📺 Watch Free Video Solution on Doubtnut
20	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.1 - Q 20 Find the integral $\int \frac{2 - 3 \sin x}{\cos^2 x} dx$ 📺 Watch Free Video Solution on Doubtnut
21	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.1 - Q 21 The anti derivative of $\left(\sqrt{x} + \frac{1}{\sqrt{x}}\right)$ equals (A) $\frac{1}{3}x^{\frac{1}{3}} + 2x^{\frac{1}{2}} + C$ (B) $\frac{2}{3}x^{\frac{2}{3}} + \frac{1}{2}x^2 + C$ (C) $\frac{2}{3}x^{\frac{3}{2}} + 2x^{\frac{1}{2}} + C$ (D) $\frac{3}{2}x^{\frac{3}{2}} + \frac{1}{2}x^{\frac{1}{2}} + C$ 📺 Watch Free Video Solution on Doubtnut
22	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.1 - Q 22 If $\frac{d}{dx} f(x) = 4x^3 - \frac{3}{x^4}$ such that $f(2) = 0$. Then f(x) is (A) $x^4 + \frac{1}{x^3} - \frac{129}{8}$ (B) $x^3 + \frac{1}{x^4} + \frac{129}{8}$ (C) $x^4 + \frac{1}{x^3} + \frac{129}{8}$ (D) $x^3 + \frac{1}{x^4} - \frac{129}{8}$ 📺 Watch Free Video Solution on Doubtnut
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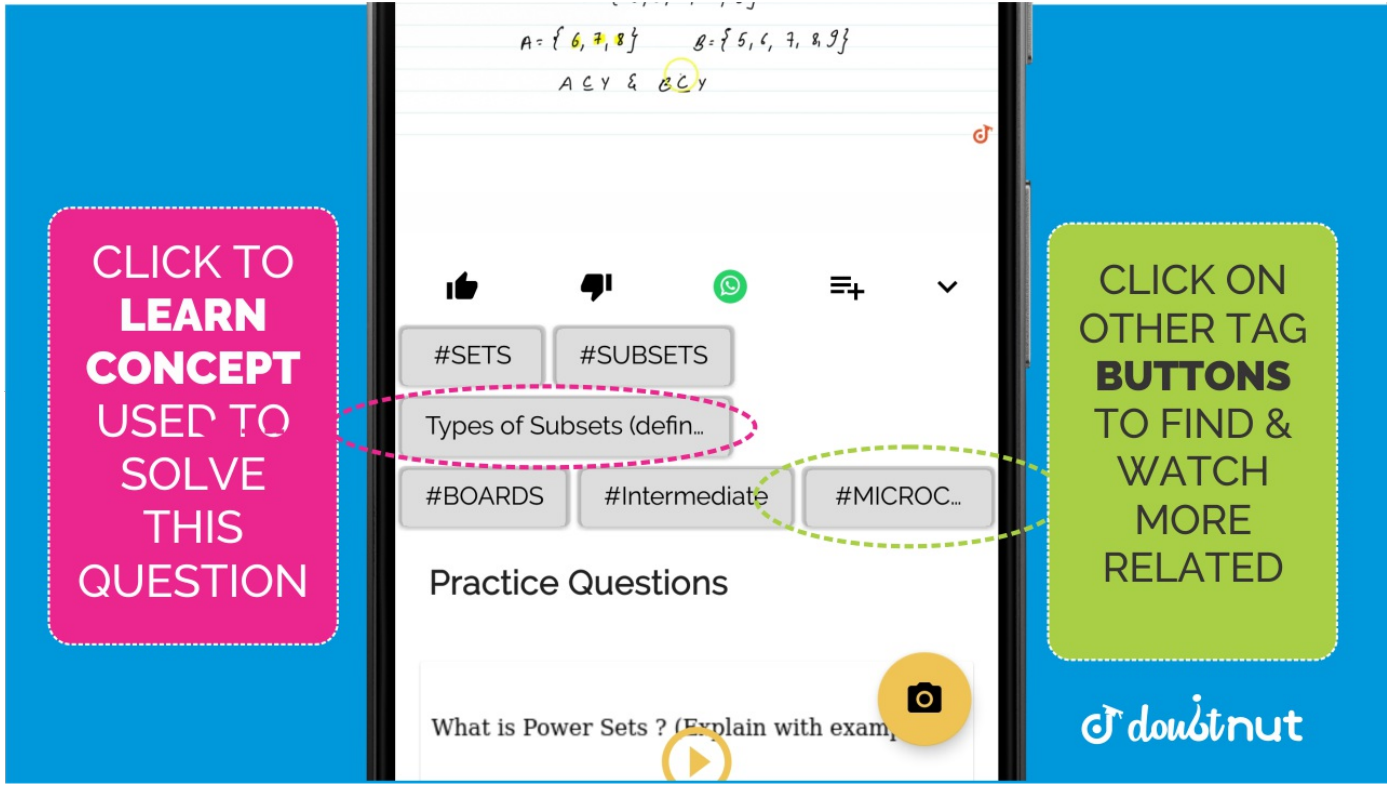
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29	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.10 - Q 7 Evaluate the integrals $\int_{-1}^1 \frac{dx}{x^2+2x+5}$ ▶ Watch Free Video Solution on Doubtnut
	
30	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.10 - Q 8 Evaluate the integrals $\int_1^2 \left(\frac{1}{x} - \frac{1}{2x^2} \right) e^{2x} dx$ ▶ Watch Free Video Solution on Doubtnut
31	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.10 - Q 9 Choose the correct answer The value of the integral $\int_{\frac{1}{3}}^1 \frac{(x-x^3)^{\frac{1}{3}}}{x^4} dx$ is (A) 6 (B) 0 (C) 3 (D) 4 ▶ Watch Free Video Solution on Doubtnut
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32	Choose the correct answer If $f(x) = \int_0^x t \sin t dt$, then $f'(x)$ is (A) $\cos x + x$ (B) $x \sin x$ (C) $x \cos x$ (D) $\sin x + x$ $\cos x$ ▶ Watch Free Video Solution on Doubtnut
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34	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.11 - Q 2 By using the properties of definite integrals, evaluate the integrals $\int_0^{\frac{\pi}{2}} \frac{\sqrt{\sin x}}{\sqrt{\sin x} + \sqrt{\cos x}} dx$ ▶ Watch Free Video Solution on Doubtnut
35	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.11 - Q 3 By using the properties of definite integrals, evaluate the integrals $\int_0^{\frac{\pi}{2}} \frac{\sin^{\frac{3}{2}} x dx}{\sin^{\frac{3}{2}} x + \cos^{\frac{3}{2}} x}$ ▶ Watch Free Video Solution on Doubtnut



36	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.11 - Q 4 By using the properties of definite integrals, evaluate the integrals $\int_0^{\frac{\pi}{2}} \frac{\cos^5 x dx}{\sin^5 x + \cos^5 x}$ ▶ Watch Free Video Solution on Doubtnut
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46	By using the properties of definite integrals, evaluate the integrals $\int_0^{\frac{\pi}{2}} \frac{\sin x - \cos x}{1 + \sin x \cos x} dx$ ▶ Watch Free Video Solution on Doubtnut
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48	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.11 - Q 17 By using the properties of definite integrals, evaluate the integrals $\int_0^a \frac{\sqrt{x}}{\sqrt{x} + \sqrt{a-x}} dx$ ▶ Watch Free Video Solution on Doubtnut
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50	$\int_0^a f(x)g(x)dx = 2$ $\int_0^a f(x)dx$ if f and g defined as $f(x) = f(a - x)$ and $g(x) + g(a - x) = 4$ ▶ Watch Free Video Solution on Doubtnut
51	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.11 - Q 20 Choose the correct answer The Value of $\int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} (x^3 + x \cos x + \tan^5 x + 1) dx$ is (A) 0 (B) 2 (C) π (D) 1 ▶ Watch Free Video Solution on Doubtnut
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Integrate the functions $\frac{(\log x)^2}{x}$

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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.2 - Q 3

Integrate the functions $\frac{1}{x + x \log x}$

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Integrate the functions $\sin x \sin(\cos x)$

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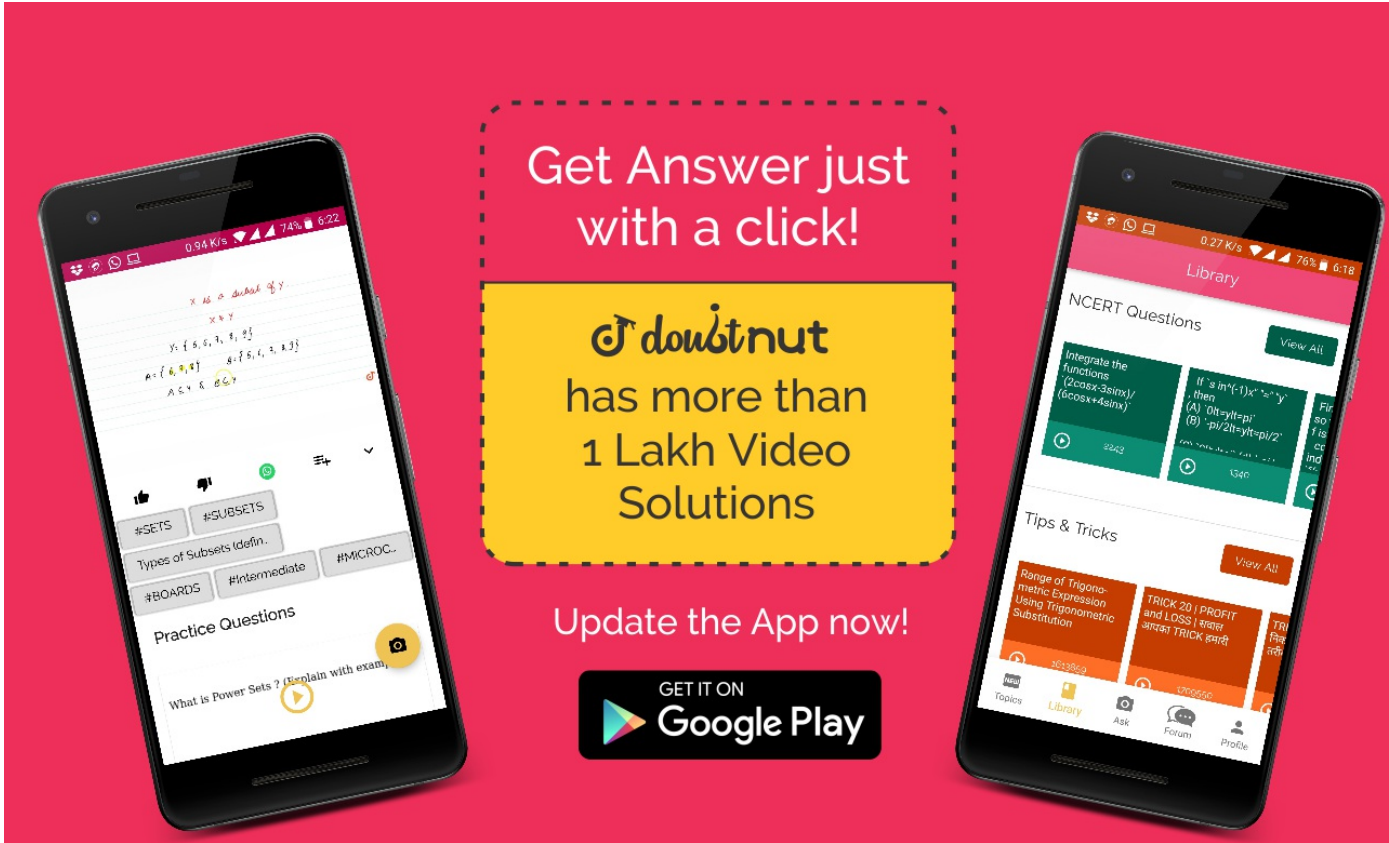
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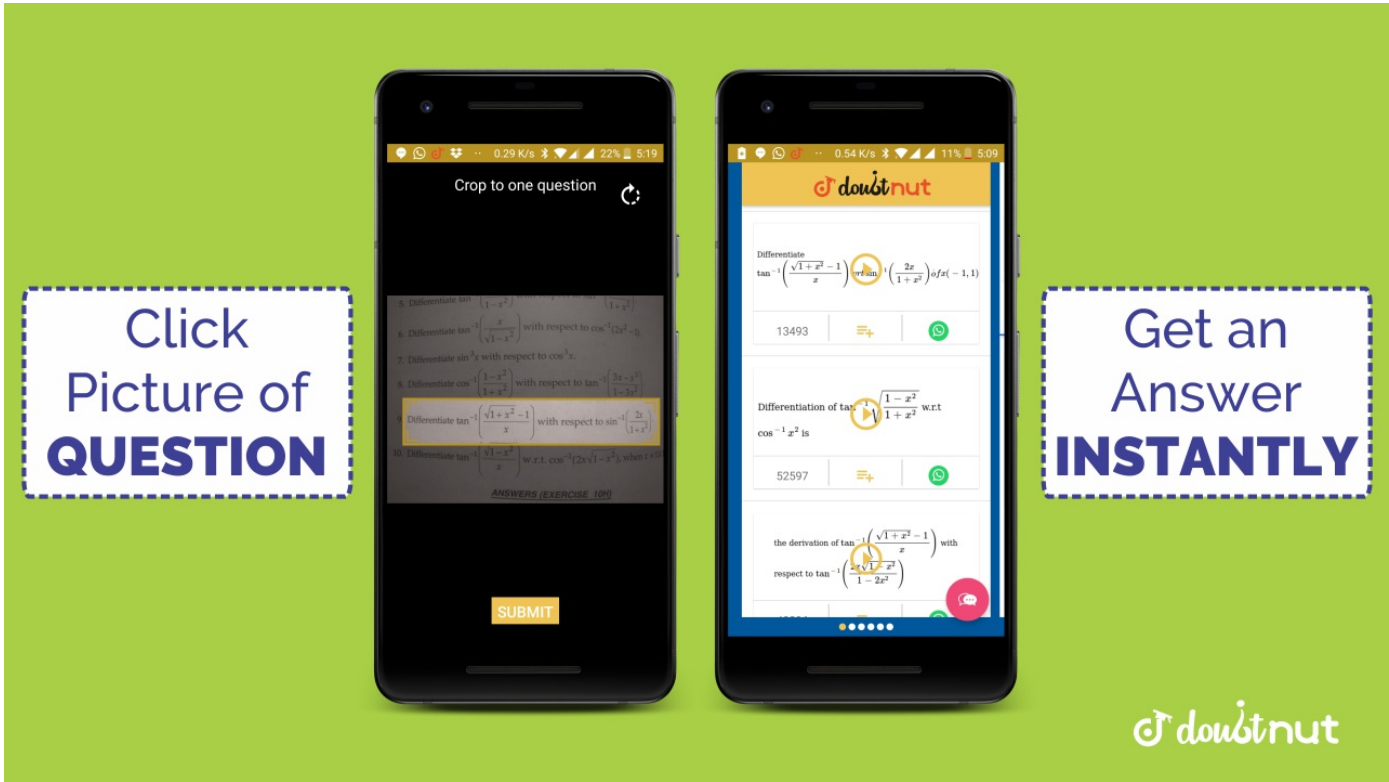
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Integrate the functions $\sin(ax + b)\cos(ax + b)$

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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.2 - Q 27

Integrate the functions $\sqrt{\sin 2x} \cos 2x$

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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.2 - Q 28

Integrate the functions $\frac{\cos x}{\sqrt{1 + \sin x}}$

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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.2 - Q 29

Integrate the functions $\cot x \log \sin x$

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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.2 - Q 30

Integrate the functions $\frac{\sin x}{1 + \cos x}$

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Integrate the functions $\frac{\sin x}{(1 + \cos x)^2}$

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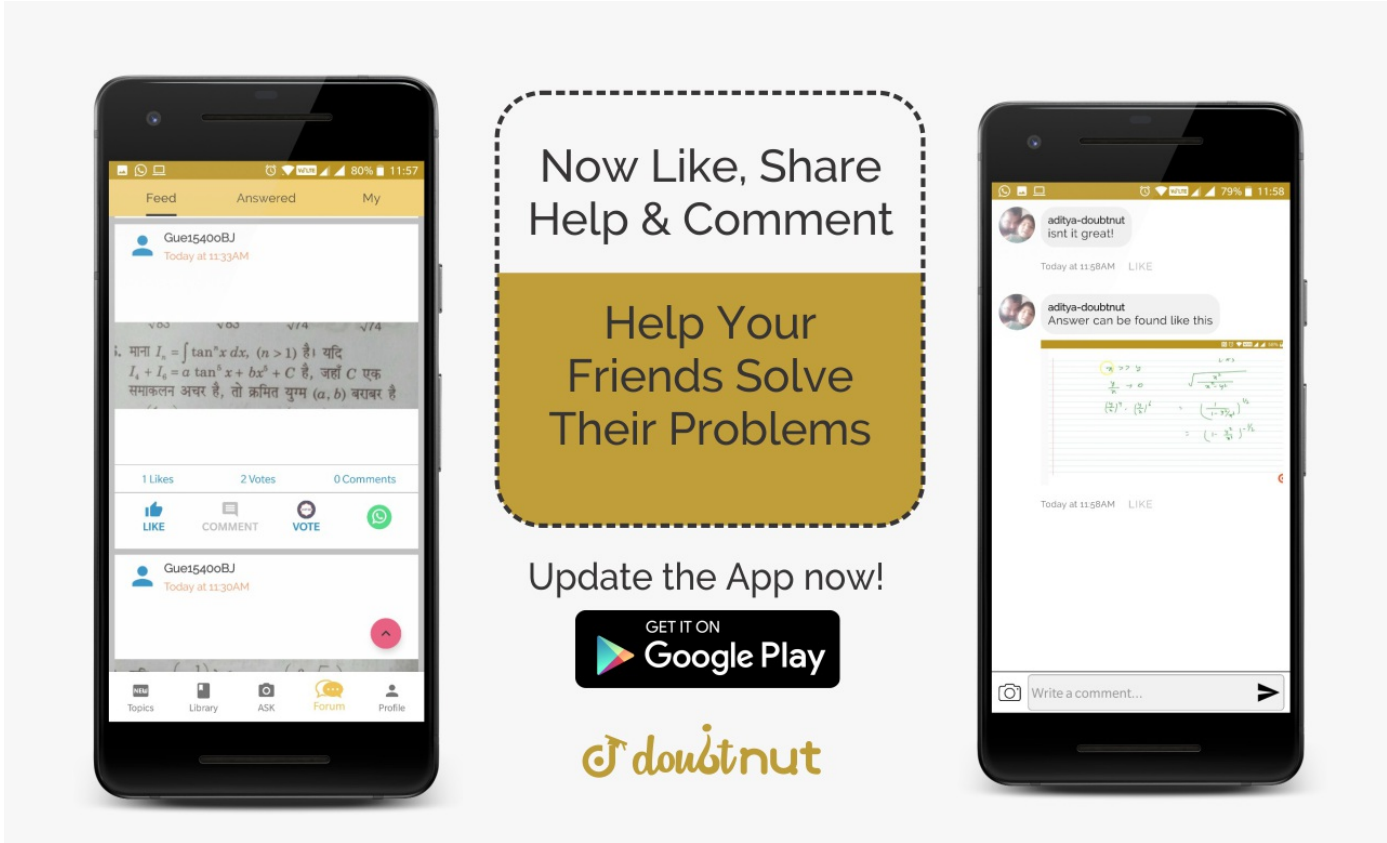
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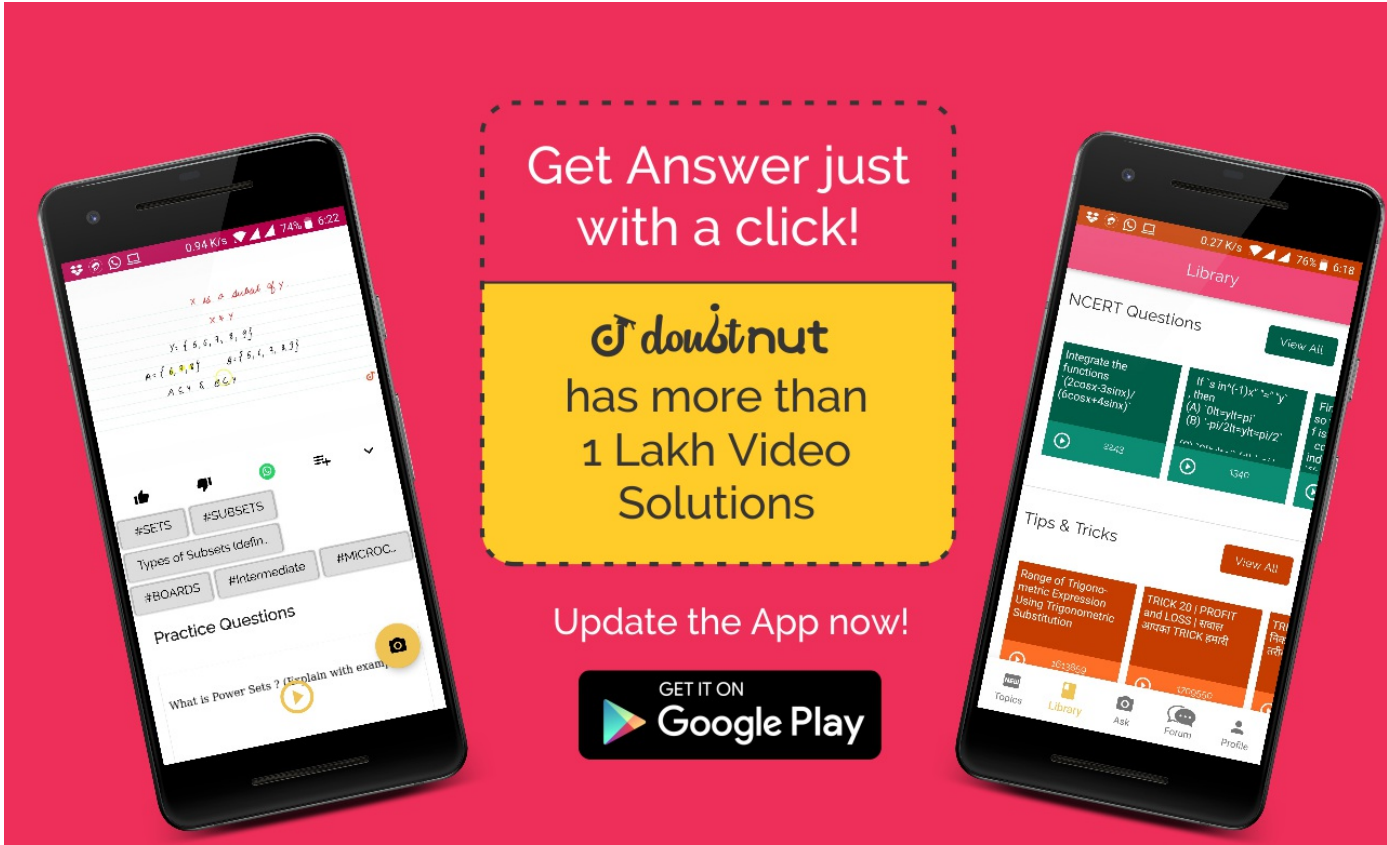
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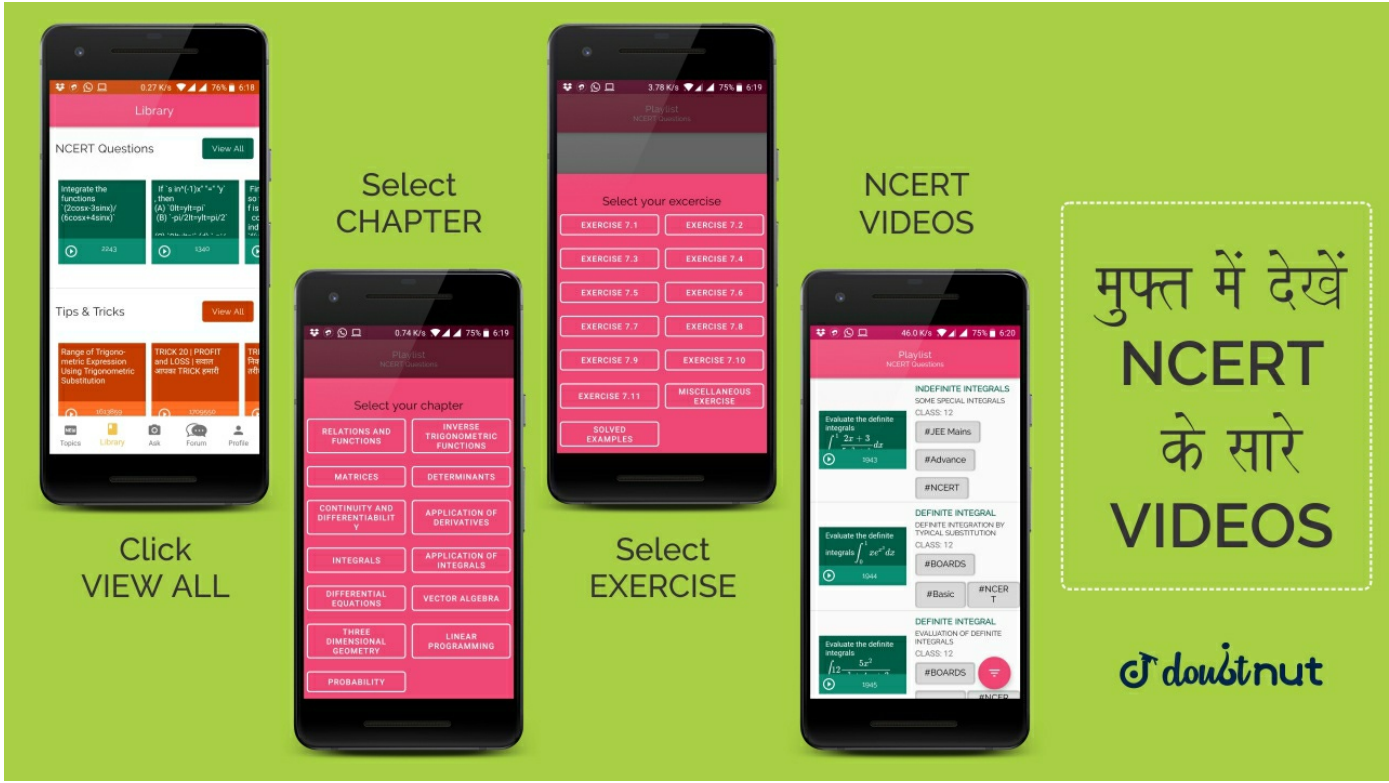
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114	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.3 - Q 23 $\int \frac{\sin^2 x - \cos^2 x}{\sin^2 x \cos^2 x} dx$ is equal to (A) $\tan x + \cot x + c$ (B) $\tan x + \operatorname{cosec} x + c$ (C) $-\tan x + \cot x + c$ (D) $\tan x + \sec x + c$ ▶ Watch Free Video Solution on Doubtnut

115	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.3 - Q 24 $\int \left(e^x \frac{1+x}{\cos^2(e^x \cdot x)} dx \right)$ equals (A) $-\cot(xe^x) + C$ (B) $\tan(xe^x) + C$ (C) $\tan(e^x) + C$ (D) $\cot(e^x) + C$ ▶ Watch Free Video Solution on Doubtnut
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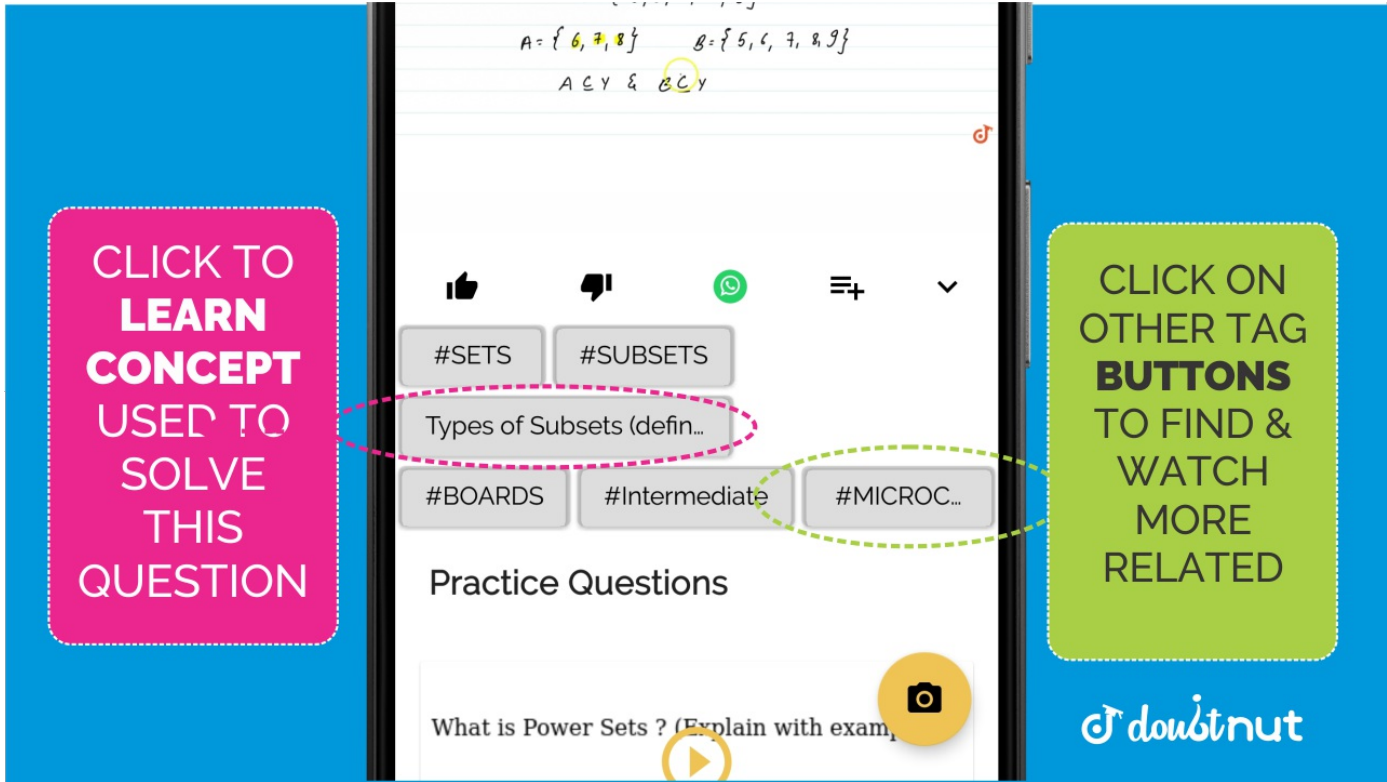
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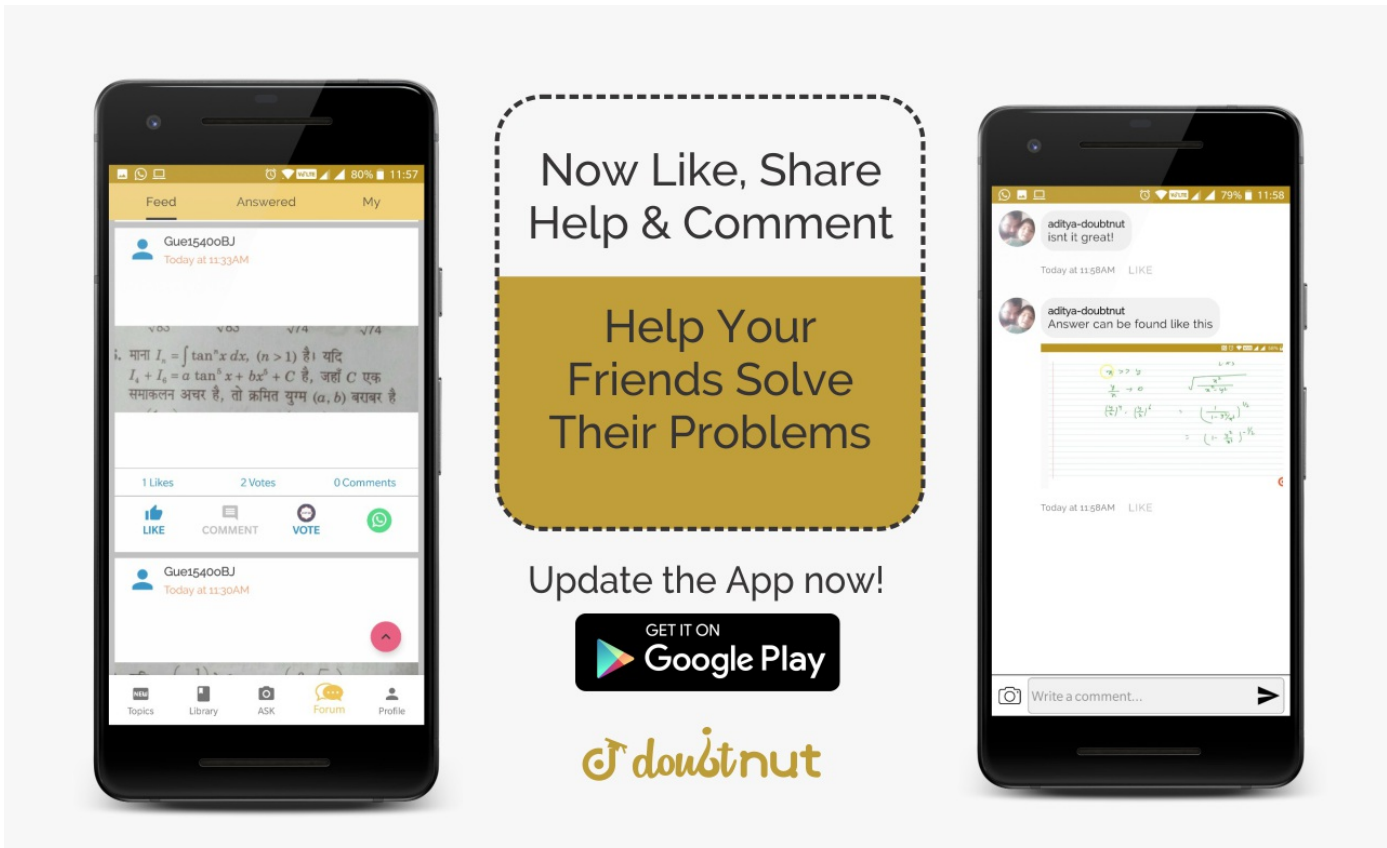
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139	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.4 - Q 24 $\int \frac{dx}{x^2 + 2x + 2}$ equals (A) $x \tan^{-1}(x + 1) + C$ (B) $\tan^{-1}(x + 1) + C$ (C) $(x + 1)\tan^{-1} x + C$ (D) $\tan^{-1} x + C$ ▶ Watch Free Video Solution on Doubtnut
140	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.4 - Q 25 $\int \frac{dx}{\sqrt{9x - 4x^2}}$ equals (A) $\frac{1}{9} \sin^{-1} \left(\frac{9x - 8}{8} \right) + C$ (B) $\frac{1}{2} \sin^{-1} \left(\frac{8x - 9}{9} \right) + C$ (C) $\frac{1}{3} \sin^{-1} \left(\frac{9x - 8}{8} \right) + C$ (D) $\frac{1}{2} \sin^{-1} \left(\frac{9x - 8}{9} \right) + C$ ▶ Watch Free Video Solution on Doubtnut
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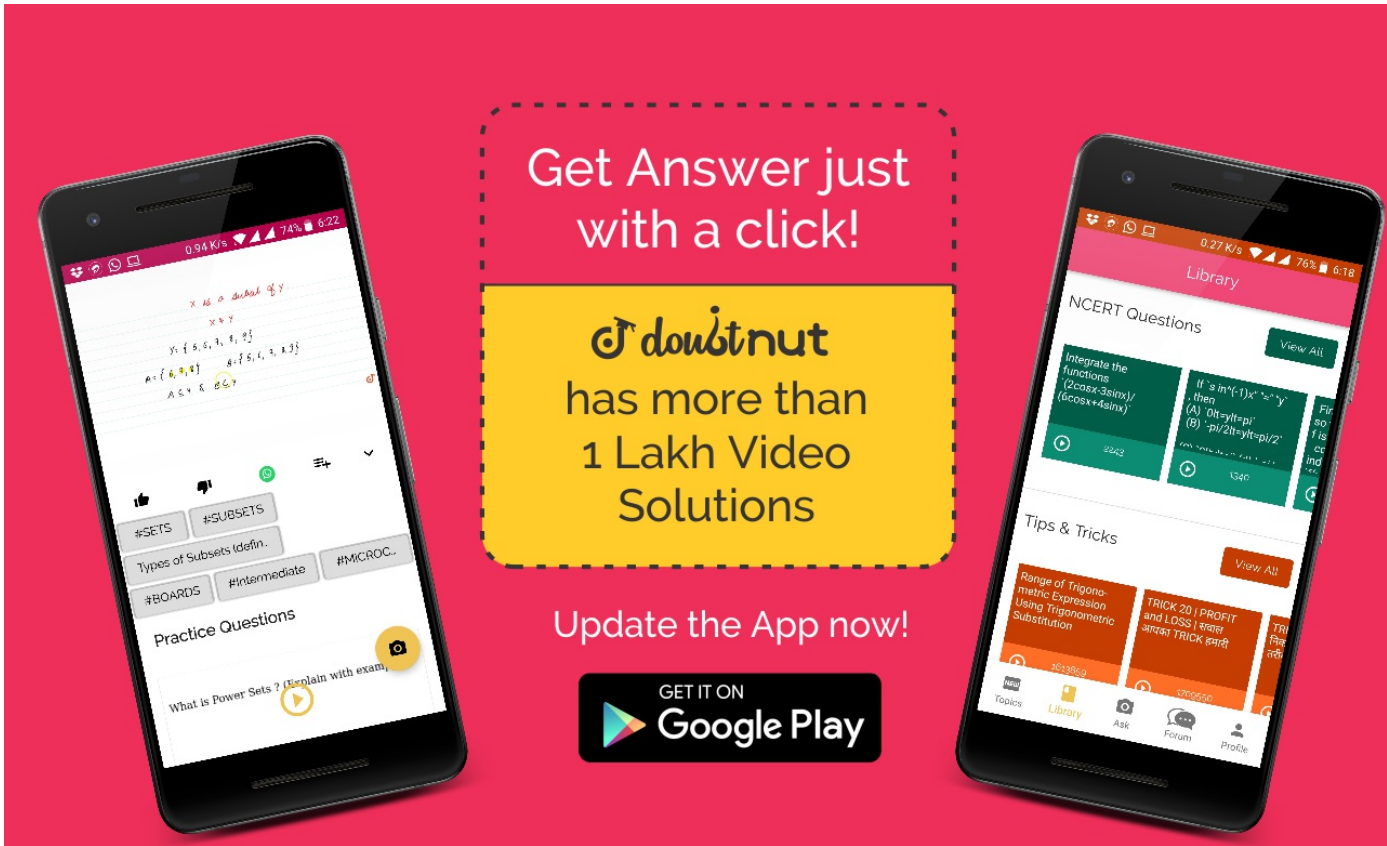
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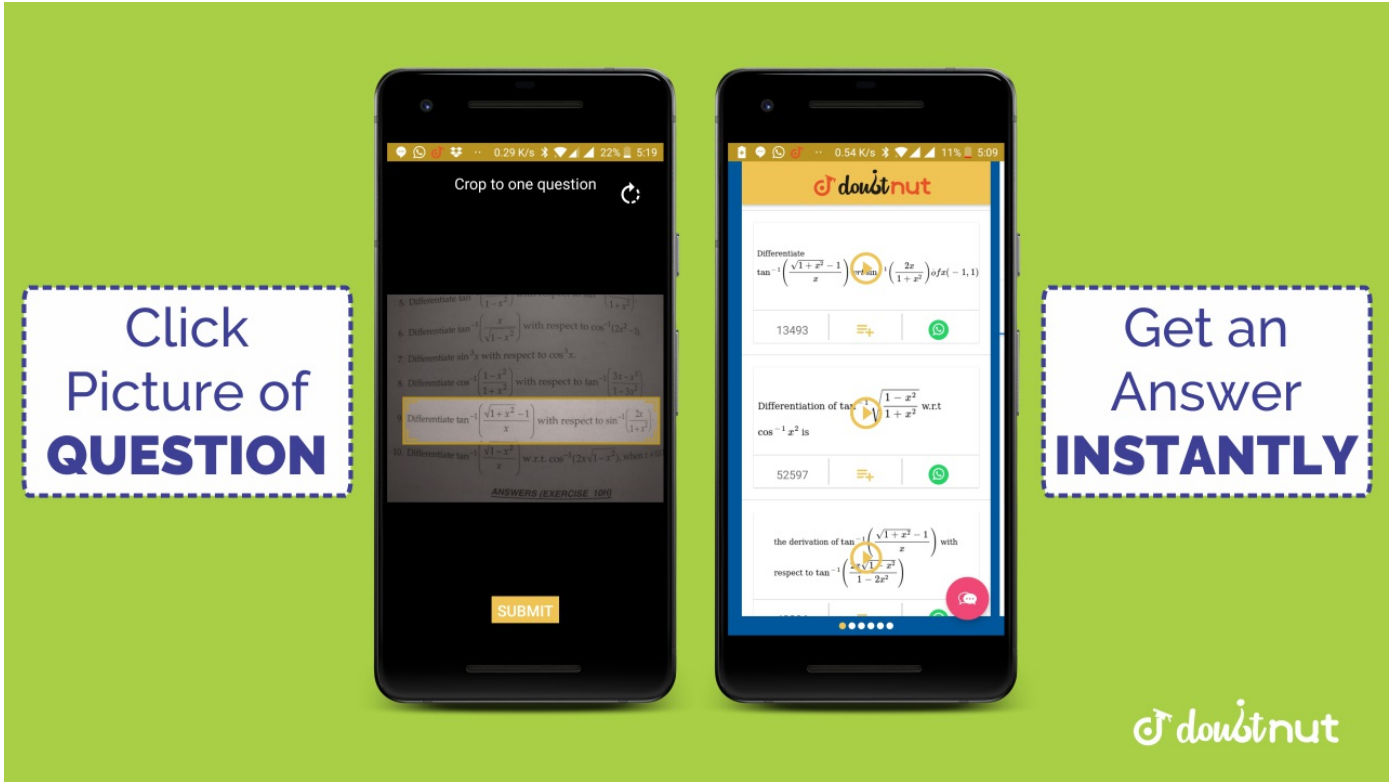
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150	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.5 - Q 10 Integrate the rational functions $\frac{2x-3}{(x^2-1)(2x-4)}$ ▶ Watch Free Video Solution on Doubtnut
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153	Integrate the rational functions $\frac{2}{(1-x)(1+x^2)}$ ▶ Watch Free Video Solution on Doubtnut
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156	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.5 - Q 16 Integrate the rational functions $\frac{1}{x(x^n+1)}$ [Hint: multiply numerator and denominator by x^{n-1} and put $x^n = t$] ▶ Watch Free Video Solution on Doubtnut
157	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.5 - Q 17 Integrate the rational functions $\frac{\cos x}{(1-\sin x)(2-\sin x)}$ [Hint: Put $\sin x = t$] ▶ Watch Free Video Solution on Doubtnut

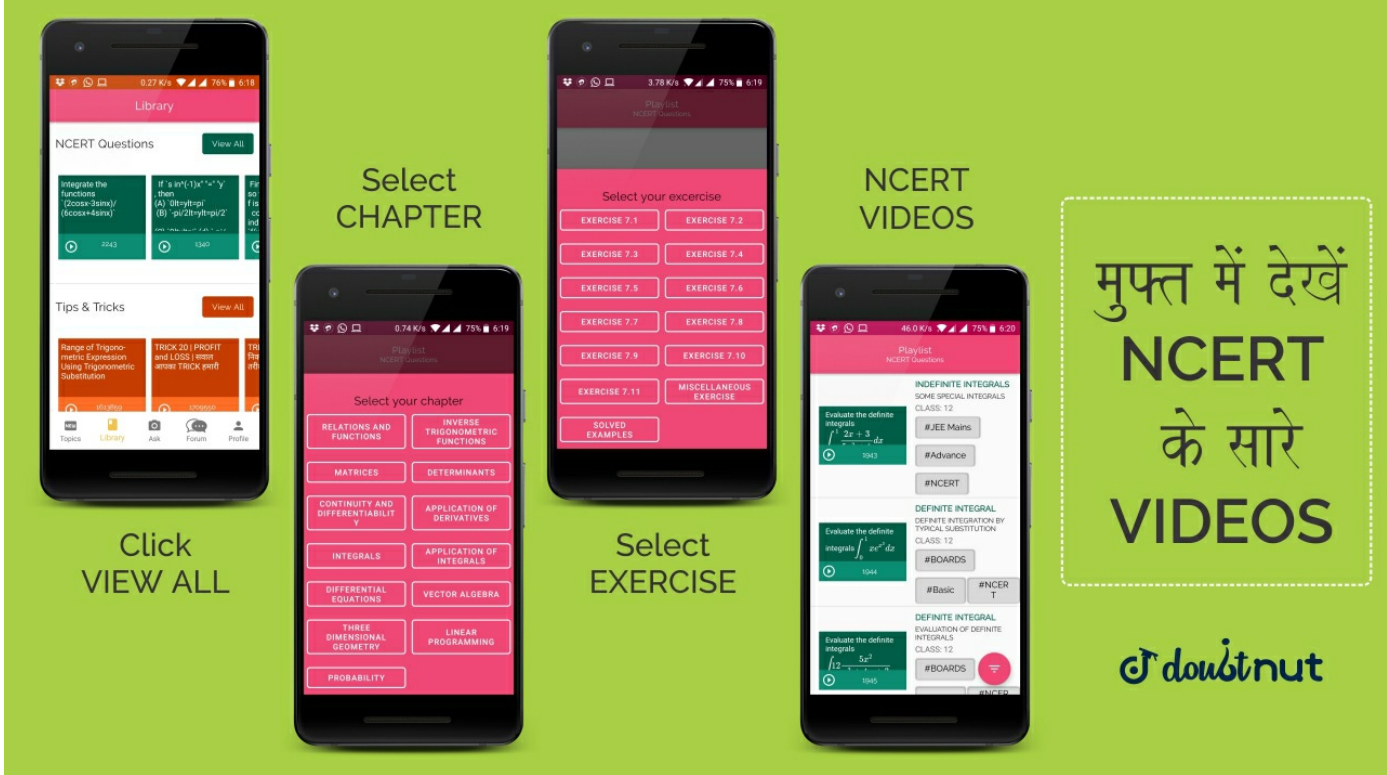
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161	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.5 - Q 21 Integrate the rational functions $\frac{1}{(e^x - 1)}$ [Hint : Put $e^x = t$] ▶ Watch Free Video Solution on Doubtnut
	
162	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.5 - Q 22 $\int \frac{xdx}{(x - 1)(x - 2)}$ equal (A) $\log \left \frac{(x - 1)^2}{x - 2} \right + C$ (B) $\log \left \frac{(x - 2)^2}{x - 1} \right + C$ (C) $\log \left \frac{(x - 1)^2}{x - 2} \right + C$ (D)

	$\log (x - 1)(x - 2) $ $+ C$ 📺 Watch Free Video Solution on Doubtnut
163	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.5 - Q 23 $\int \frac{dx}{x(x^2 + 1)}$ equal (A) $\log x$ $- \frac{1}{2} \log(x^2 + 1)$ $+ C$ (B) $\log x$ $+ \frac{1}{2} \log(x^2 + 1)$ $+ C$ (C) $- \log x$ $+ \frac{1}{2} \log(x^2 + 1)$ $+ C$ (D) $\frac{1}{2} \log x$ $+ \log(x^2 + 1) + C$ 📺 Watch Free Video Solution on Doubtnut
164	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.6 - Q 1 Integrate the functions $x \sin x$ 📺 Watch Free Video Solution on Doubtnut
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167	Integrate the functions $x \log x$ ▶ Watch Free Video Solution on Doubtnut
	
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172	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.6 - Q 9 Integrate the functions $x \cos^{-1} x$ ▶ Watch Free Video Solution on Doubtnut

173	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.6 - Q 10 Integrate the functions $\left(\sin^{-1} x\right)^2$ ▶ Watch Free Video Solution on Doubtnut
	
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177	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.6 - Q 14 Integrate the functions $x(\log x)^2$ ▶ Watch Free Video Solution on Doubtnut
178	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.6 - Q 15 Integrate the functions $(x^2 + 1)\log x$

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179	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.6 - Q 16 Integrate the functions $e^x (\sin x + \cos x)$ ▶ Watch Free Video Solution on Doubtnut
	
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184	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.6 - Q 21 Integrate the functions $e^{2x} \sin x$ ▶ Watch Free Video Solution on Doubtnut
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186	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.6 - Q 23 Choose the correct answer $\int x^2 e^{x^3} dx$ equals (A) $\frac{1}{3}e^{x^3} + C$ (B) $\frac{1}{3}e^{x^2} + C$ (C) $\frac{1}{2}e^{x^3} + C$ (D) $\frac{1}{2}e^{x^2} + C$ ▶ Watch Free Video Solution on Doubtnut
187	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.6 - Q 24 Choose the correct answer $\int e^x \sec x (1 + \tan x) dx$ (A) $e^x \cos x + C$ (B) $e^x \sec x + C$ (C) $e^x \sin x + C$ (D) $e^x \tan x + C$ ▶ Watch Free Video Solution on Doubtnut
	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.7 - Q 1 Integrate the functions $\sqrt{4-x^2}$

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193	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.7 - Q 6 Integrate the functions $\sqrt{x^2 + 4x - 5}$ ▶ Watch Free Video Solution on Doubtnut

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196	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.7 - Q 9 Integrate the functions $\sqrt{1 + \frac{x^2}{9}}$ ▶ Watch Free Video Solution on Doubtnut
197	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.7 - Q 10 Choose the correct answer $\int \sqrt{1 + x^2} dx$ is equal to (A) $\frac{x}{2} \sqrt{1 + x^2}$ $+ \frac{1}{2} \log \left \left(x + \sqrt{x + x^2} \right) \right + C$ (B) $\frac{2}{3} (1 + x^2)^{\frac{3}{2}} + C$ (C) $\frac{2}{3} x (1 + x^2)^{\frac{3}{2}} + C$ (D) $\frac{x^2}{2} \sqrt{1 + x^2}$ $+ \frac{1}{2} x^2 \log x + \sqrt{1 + x^2} + C$ ▶ Watch Free Video Solution on Doubtnut
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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.7 - Q 11

Choose the correct answer $\int \sqrt{x^2 - 8x + 7} dx$ (A)

$$\frac{1}{2} (x - 4) \sqrt{x^2 - 8x + 7} + 9 \log |x - 4| + \sqrt{x^2 - 8x + 7} + C$$

$$(B) \frac{1}{2} (x + 4) \sqrt{x^2 - 8x + 7} + 9 \log |x + 4| + \sqrt{x^2 - 8x + 7} + C$$

$$(C) \frac{1}{2} (x - 4) \sqrt{x^2 - 8x + 7} - 3\sqrt{2} \log |x - 4| + \sqrt{x^2 - 8x + 7} + C$$

$$(D) \frac{1}{2} (x - 4) \sqrt{x^2 - 8x + 7} - \left(\frac{9}{2}\right) \log |x - 4| + \sqrt{x^2 - 8x + 7} + C$$

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Integrate : $\int x \sqrt{x + x^2} dx$

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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.7 - Q 13

Integrate $(x + 1)\sqrt{2x^2 + 3}$

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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.7 - Q 14

Integrate the function
 $(x + 3)\sqrt{3 - 4x - x^2}$

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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.8 - Q 1

Evaluate the following definite integrals as limit of sums. $\int_a^b x dx$

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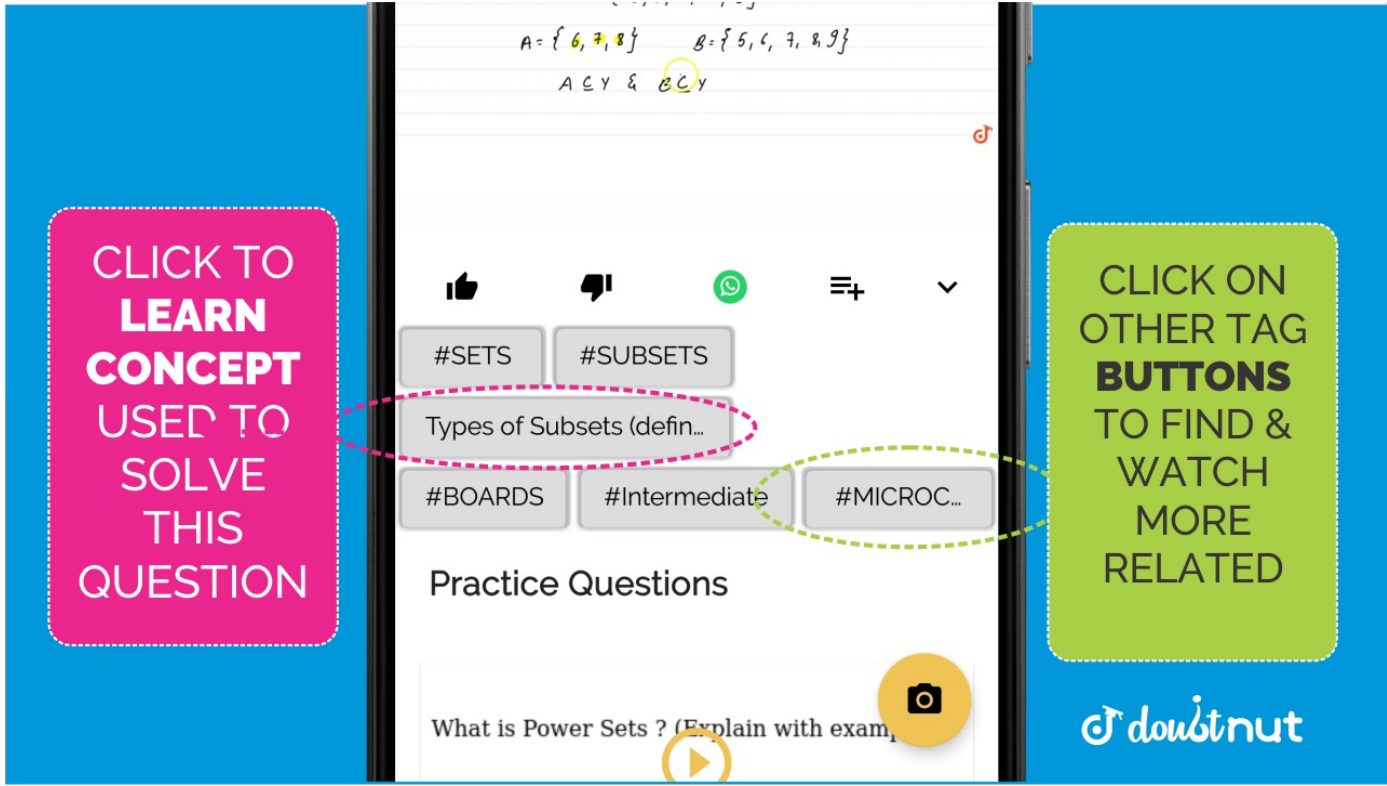
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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.8 - Q 2

Evaluate the following definite integrals as limit of sums. $\int_0^5 (x + 1) dx$

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204	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.8 - Q 3 Evaluate the following definite integrals as limit of sums. $\int_2^3 x^2 dx$ ▶ Watch Free Video Solution on Doubtnut
205	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.8 - Q 4 Evaluate the following definite integrals as limit of sums. $\int_1^4 (x^2 - x) dx$ ▶ Watch Free Video Solution on Doubtnut
206	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.8 - Q 5 Evaluate the following definite integrals as limit of sums. $\int_{-1}^1 e^x dx$ ▶ Watch Free Video Solution on Doubtnut
207	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.8 - Q 6 Evaluate the following definite integrals as limit of sums. $\int_0^4 (x + e^{2x}) dx$ ▶ Watch Free Video Solution on Doubtnut
208	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.9 - Q 1 Evaluate the definite integrals $\int -11(x + 1) dx$ ▶ Watch Free Video Solution on Doubtnut

209	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.9 - Q 2 Evaluate the definite integrals $\int_2^3 \frac{1}{x} dx$ ▶ Watch Free Video Solution on Doubtnut
	
210	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.9 - Q 3 Evaluate the definite integrals $\int_1^2 (4x^3 - 5x^2 + 6x + 9) dx$ ▶ Watch Free Video Solution on Doubtnut
211	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.9 - Q 4 Evaluate the definite integrals $\int_0^{\frac{\pi}{4}} \sin 2x dx$ ▶ Watch Free Video Solution on Doubtnut
212	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.9 - Q 5 Evaluate the definite integrals $\int_0^{\frac{\pi}{2}} \cos 2x dx$ ▶ Watch Free Video Solution on Doubtnut
213	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.9 - Q 6 Evaluate the definite integrals $\int 45e^x dx$ ▶ Watch Free Video Solution on Doubtnut

214	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.9 - Q 7 Evaluate the definite integrals $\int_0^{\frac{\pi}{4}} (\tan x) dx$ ▶ Watch Free Video Solution on Doubtnut
215	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.9 - Q 8 Evaluate the definite integrals $\int_{\frac{\pi}{6}}^{\frac{\pi}{4}} \cos ecx dx$ ▶ Watch Free Video Solution on Doubtnut
216	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.9 - Q 9 Evaluate the definite integrals $\int_0^1 \frac{dx}{\sqrt{1-x^2}}$ ▶ Watch Free Video Solution on Doubtnut
217	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.9 - Q 10 Evaluate the definite integrals $\int_0^1 \frac{dx}{1-x^2}$

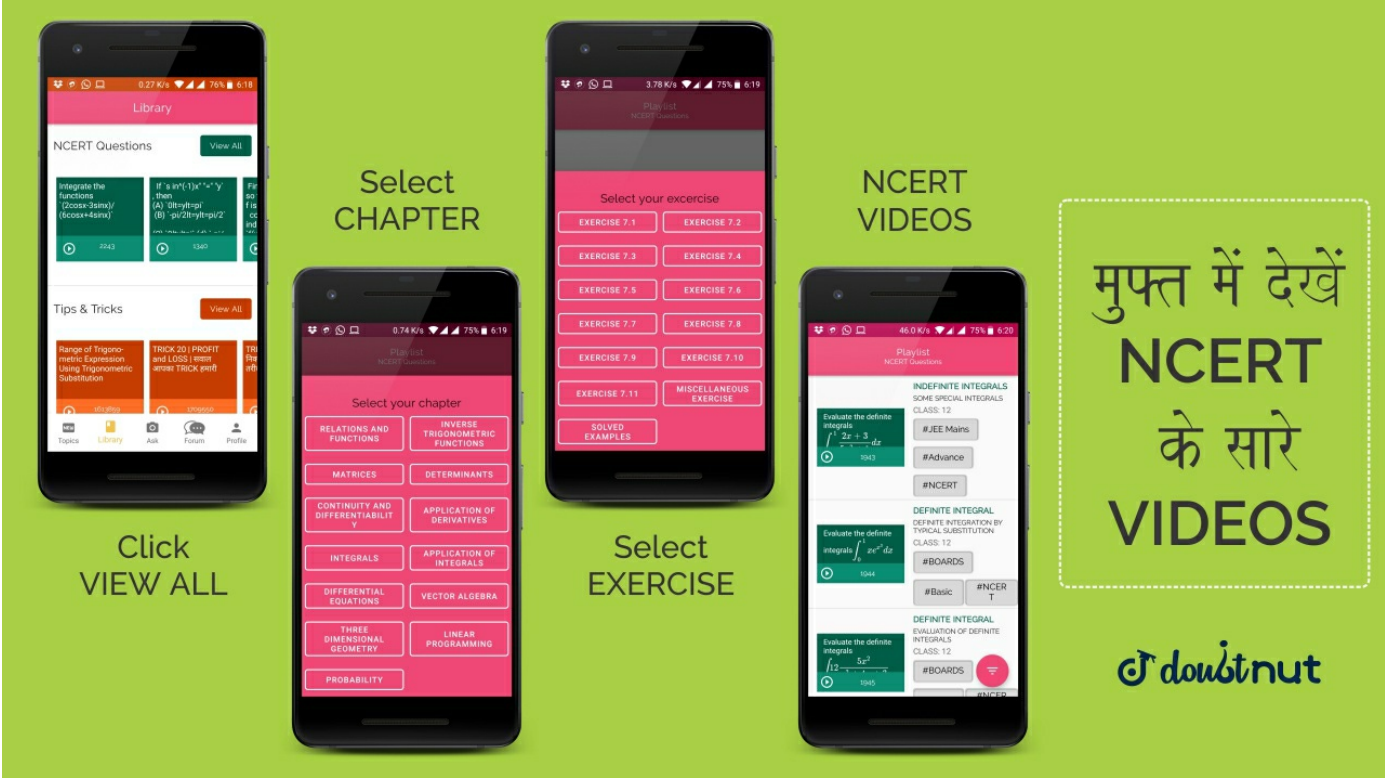
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218	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.9 - Q 11 Evaluate the definite integrals $\int_2^3 \frac{dx}{x^2 - 1}$ ▶ Watch Free Video Solution on Doubtnut
219	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.9 - Q 12 Evaluate the definite integrals $\int_0^{\frac{\pi}{2}} \cos^2 x dx$ ▶ Watch Free Video Solution on Doubtnut
220	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.9 - Q 13 Evaluate the definite integrals $\int_2^3 \frac{x dx}{x^2 + 1}$ ▶ Watch Free Video Solution on Doubtnut
221	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.9 - Q 14 Evaluate the definite integrals $\int_0^1 \frac{2x + 3}{5x^2 + 1} dx$ ▶ Watch Free Video Solution on Doubtnut
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222	Evaluate the definite integrals $\int_0^1 x e^{x^3} dx$ 📺 Watch Free Video Solution on Doubtnut
223	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.9 - Q 16 Evaluate the definite integrals $\int_0^{12} \frac{5x^2}{x^2 + 4x + 3}$ 📺 Watch Free Video Solution on Doubtnut
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227	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.9 - Q 20 Evaluate the definite integrals $\int_0^1 \left(x e^x + \frac{\sin(\pi x)}{4} \right) dx$ 📺 Watch Free Video Solution on Doubtnut

228	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.9 - Q 21 Choose the correct answer $\int_1^{\sqrt{3}} \frac{dx}{1+x^2}$ equals (A) $\frac{\pi}{3}$ (B) $\frac{2\pi}{3}$ (C) $\frac{\pi}{6}$ (D) $\frac{\pi}{12}$ ▶ Watch Free Video Solution on Doubtnut
229	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - EXERCISE 7.9 - Q 22 Choose the correct answer $\int_0^{\frac{2}{3}} \frac{dx}{4+9x^2}$ (A) $\frac{\pi}{6}$ (B) $\frac{\pi}{12}$ (C) $\frac{\pi}{24}$ (D) $\frac{\pi}{4}$ ▶ Watch Free Video Solution on Doubtnut
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231	Q 2 Integrate the functions $\frac{1}{\sqrt{x+a} + \sqrt{x+b}}$ 📺 Watch Free Video Solution on Doubtnut
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234	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - MISCELLANEOUS EXERCISE - Q 5 Integrate the functions $\frac{1}{x^{\frac{1}{2}} + x^{\frac{1}{3}}}$ [Hint: $\frac{1}{x^{\frac{1}{2}} + x^{\frac{1}{3}}} = \frac{1}{x^{\frac{1}{3}} \left(1 + x^{\frac{1}{6}}\right)}$, put $x = t^6$] 📺 Watch Free Video Solution on Doubtnut

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239	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - MISCELLANEOUS EXERCISE - Q 10 Integrate the functions $\frac{\sin^8 x - \cos^8 x}{1 - 2\sin^2 x \cos^2 x}$ ▶ Watch Free Video Solution on Doubtnut

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	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - MISCELLANEOUS EXERCISE - Q 19 Integrate the functions

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$$\frac{\sin^{-1} \sqrt{x} - \cos^{-1} \sqrt{x}}{\sin^{-1} \sqrt{x} + \cos^{-1} \sqrt{x}}, x \in [0, 1]$$

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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - MISCELLANEOUS EXERCISE - Q 20

Integrate the functions $\sqrt{\frac{1 - \sqrt{x}}{1 + \sqrt{x}}}$

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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - MISCELLANEOUS EXERCISE - Q 21

Integrate the functions $\frac{2 + \sin 2x}{1 + \cos 2x} e^x$

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251

NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - MISCELLANEOUS EXERCISE - Q 22

Integrate the functions $\frac{x^2 + x + 1}{(x + 1)^2(x + 2)}$

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DETERMINANTS

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3 Minors and cofactors

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Definition

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4 Properties of determinants

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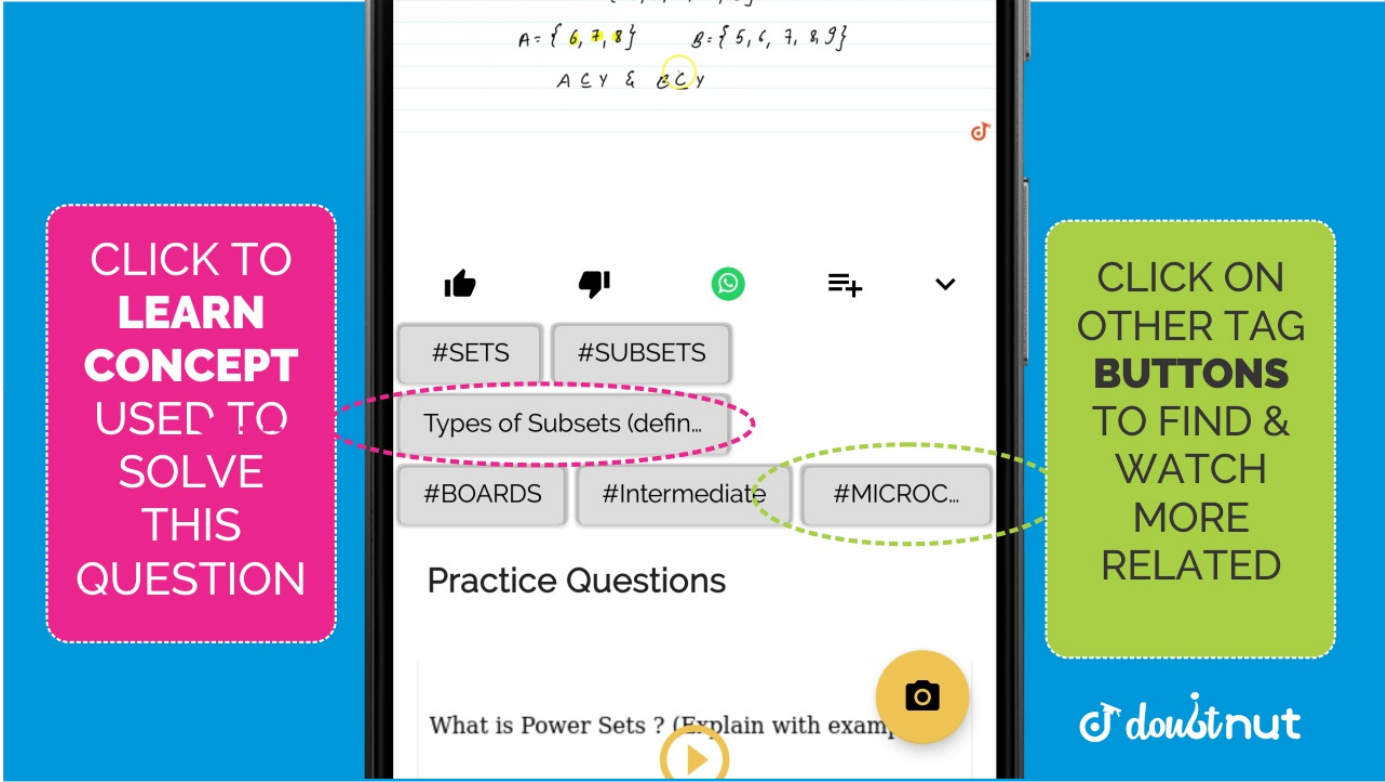
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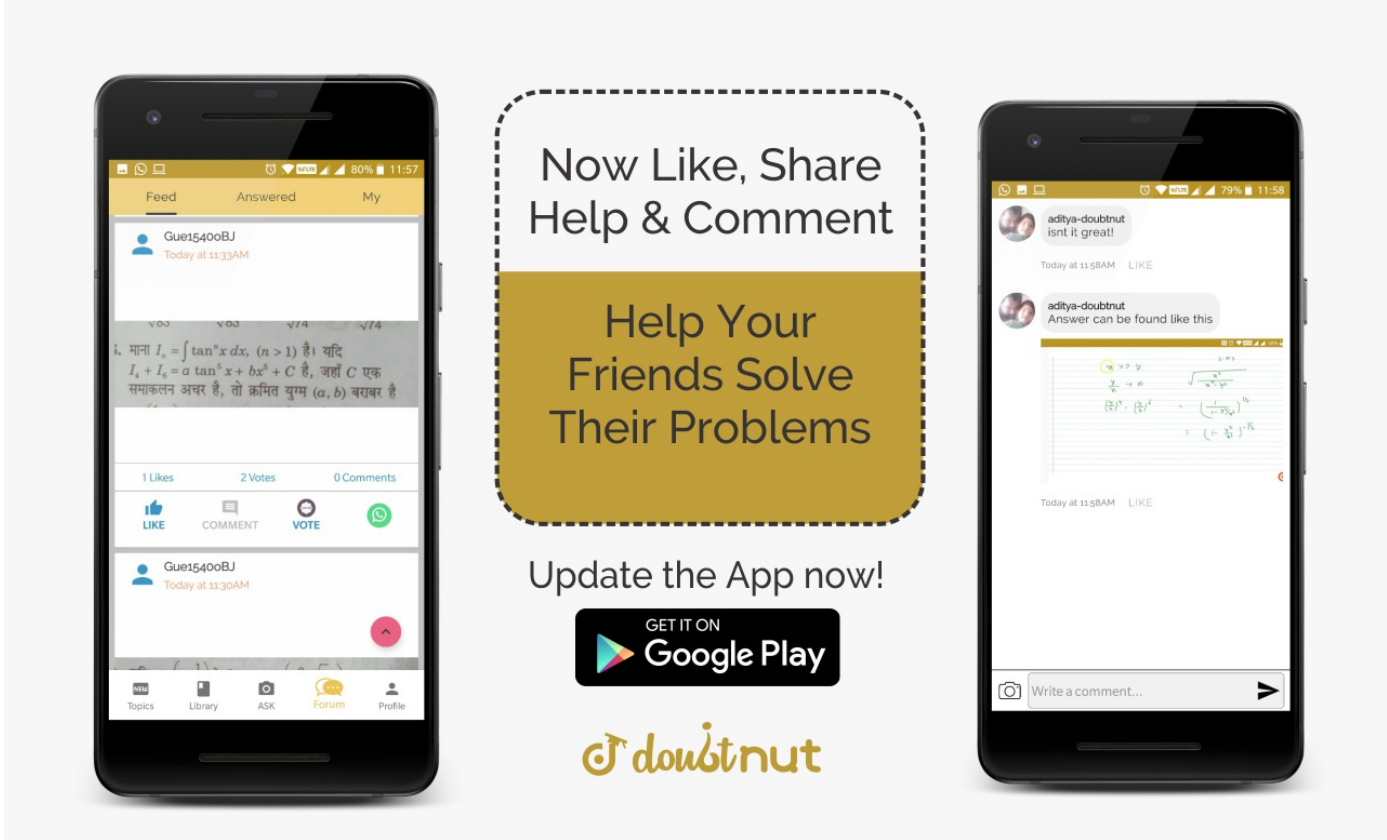
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	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - MISCELLANEOUS EXERCISE - Q 31 Evaluate the definite integrals

260	$\int_0^{\frac{\pi}{2}} \sin 2x \tan^{-1}(\sin x) dx$ ▶ Watch Free Video Solution on Doubtnut
261	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - MISCELLANEOUS EXERCISE - Q 32 Evaluate the definite integrals $\int_0^{\pi} \frac{x \tan x}{\sec x + \tan x} dx$ ▶ Watch Free Video Solution on Doubtnut
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263	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - MISCELLANEOUS EXERCISE - Q 34 Prove that $\int_1^3 \frac{dx}{x^2(x+1)} = \frac{2}{3} + \frac{\log 2}{3}$ ▶ Watch Free Video Solution on Doubtnut
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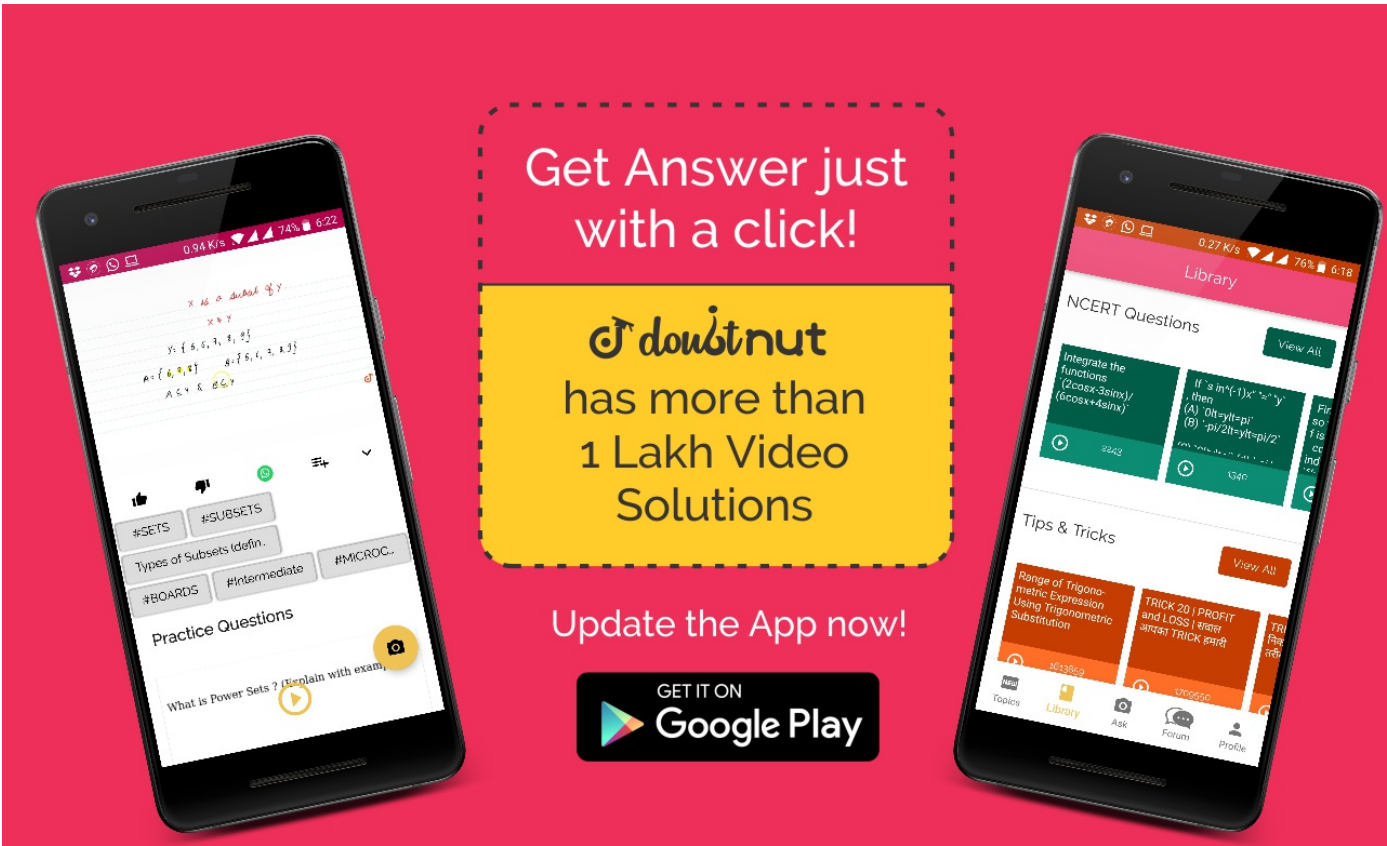
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270	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - MISCELLANEOUS EXERCISE - Q 41 Choose the correct answers $\int \frac{dx}{e^x + e^{-x}}$ is equal to (A) $\tan^{-1}(e^x) + C$ (B) $\tan^{-1}(e^{-x}) + C$ (C) $\log(e^x - e^{-x}) + C$ (D) $\log(e^x + e^{-x}) + C$ ▶ Watch Free Video Solution on Doubtnut
271	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - MISCELLANEOUS EXERCISE - Q 42 Choose the correct answers $\int \frac{\cos 2x}{(\sin x + \cos x)^2} dx$ is equal (A) $\frac{-1}{\sin x + \cos x} + C$ (B) $\log \sin x + \cos x + C$

	C) $\log \sin x - \cos x$ $+ C$ (D) $\frac{1}{(\sin x + \cos x)^2}$ ▶ Watch Free Video Solution on Doubtnut
272	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - MISCELLANEOUS EXERCISE - Q 43 If $f(a + b - x) = f(x)$, then $\int_a^b f(x)dx$ is equal to (A) $\frac{a + b}{2}$ $\int_a^b f(b - x)dx$ (B) $\frac{a + b}{2}$ $\int_a^b f(b + x)dx$ (C) $\frac{b - a}{2} \int_a^b f(x)dx$ (D) $\frac{a + b}{2} \int_a^b f(x)dx$ ▶ Watch Free Video Solution on Doubtnut
273	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - MISCELLANEOUS EXERCISE - Q 44 The value of $\int_0^1 \tan^{-1} \left(\frac{2x - 1}{1 + x - x^2} \right) dx$ is (A) 1 (B) 0 (C) -1 (D) $\frac{\pi}{4}$ ▶ Watch Free Video Solution on Doubtnut
274	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 1 Write an anti derivative for each of the following functions using the method of inspection: (i) $\cos 2x$ (ii) $3x^2 + 4x^3$ (iii) $\frac{1}{x}, x \neq 0$ ▶ Watch Free Video Solution on Doubtnut
	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 2 Find the following integrals: (i) $\int \frac{x^3 - 1}{x^3} dx$ (ii) $\int \left(x^{\frac{2}{3}} + 1 \right) dx$ (iii)

275

$$\int \left(x^{\frac{2}{3}} + 2e^x - \frac{1}{x} \right) dx$$

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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 3

Find the following integrals: (i) $\int (\sin x + \cos x) dx$ (ii)

$$\int \cos ex (\cos ex + \cos x) dx$$

(iii) $\int \frac{1 - \sin x}{\cos^2 x} dx$

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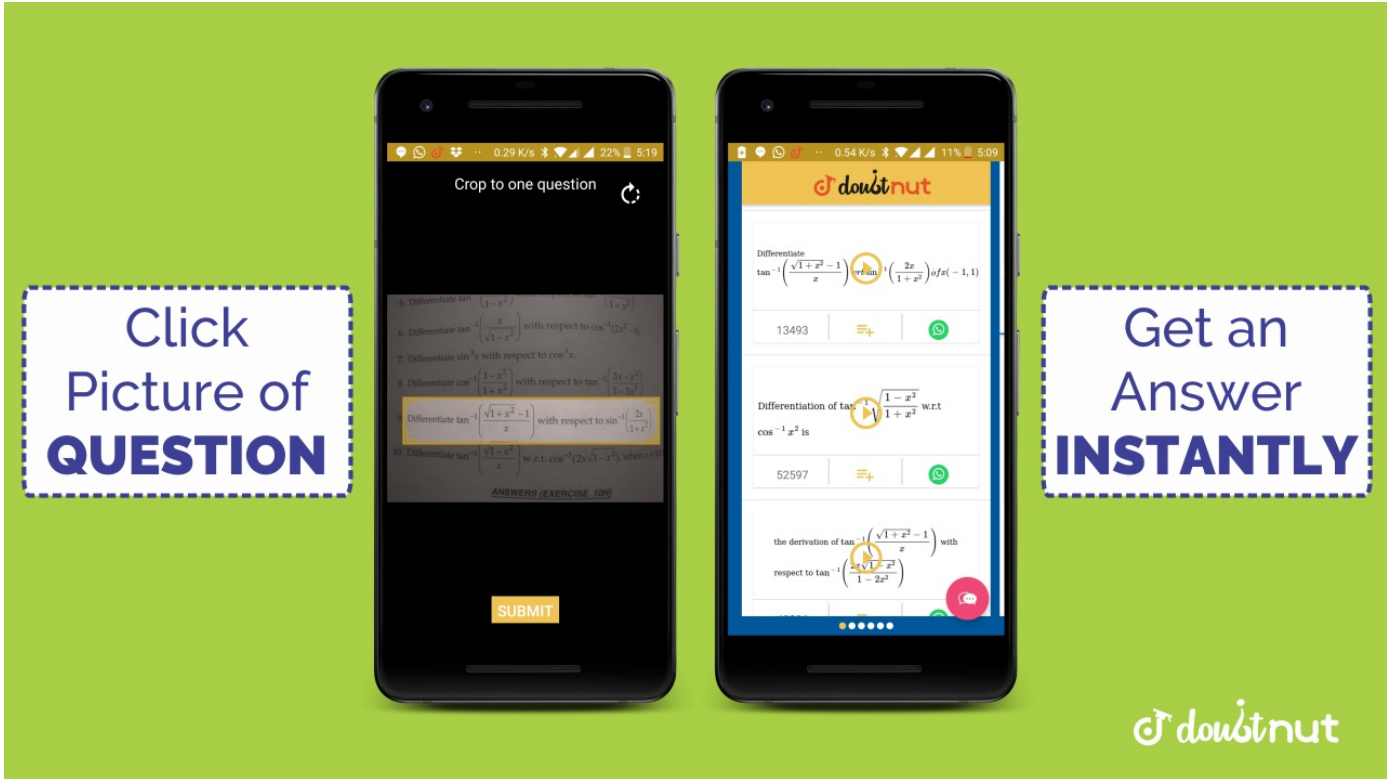
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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 4

Find the anti derivative F of f defined by $f(x) = 4x^3 - 6$, where $F(0) = 3$

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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 5

278	Integrate the following functions w.r.t. x: (i) $\sin mx$ (ii) $2x \sin(x^2 + 1)$ (iii) $\frac{\tan^4 \sqrt{x} \sec^2 \sqrt{x}}{\sqrt{x}}$ (iv) $\left(\frac{\sin(\tan^{-1} x)}{1 + x^2} \right)$ ▶ Watch Free Video Solution on Doubtnut
279	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 6 Find the following integrals: (i) $\int \sin^3 x \cos^2 x dx$ (ii) $\int \frac{\sin x}{\sin(x + a)} dx$ (iii) $\int \frac{1}{1 + \tan x} dx$ ▶ Watch Free Video Solution on Doubtnut
280	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 7 Find (i) $\int \cos^2 x dx$ (ii) $\int \sin 2x \cos 3x dx$ (iii) $\int \sin^3 x dx$ ▶ Watch Free Video Solution on Doubtnut
281	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 8 Find the following integrals: (i) $\int \frac{dx}{x^2 - 16}$ (ii) $\int \frac{dx}{\sqrt{2x - x^2}}$ ▶ Watch Free Video Solution on Doubtnut
	
282	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 9 Find the following integrals : (i) $\int \frac{dx}{x^2 - 6x + 13}$ (ii) $\int \frac{dx}{3x^2 + 13x - 10}$ (iii)

	$\int \frac{dx}{\sqrt{5x^2 - 2x}}$ ▶ Watch Free Video Solution on Doubtnut
283	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 10 Find the following integrals: $\int \frac{x + 3}{\sqrt{5 - 4x + x^2}} dx$ ▶ Watch Free Video Solution on Doubtnut
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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 14

Find

$$\int \frac{x^2}{(x^2 + 1)(x^2 + 4)} dx$$

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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 15

Find

$$\int \frac{(3 \sin \varphi - 2) \cos \varphi}{5 - \cos \varphi - 4 \sin \varphi} d\varphi$$

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290

NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 16

Find

$$\int \frac{x^2 + x + 1}{(x + 2)(x^2 + 1)} dx$$

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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 17

Find

$$\int x \cos x dx$$

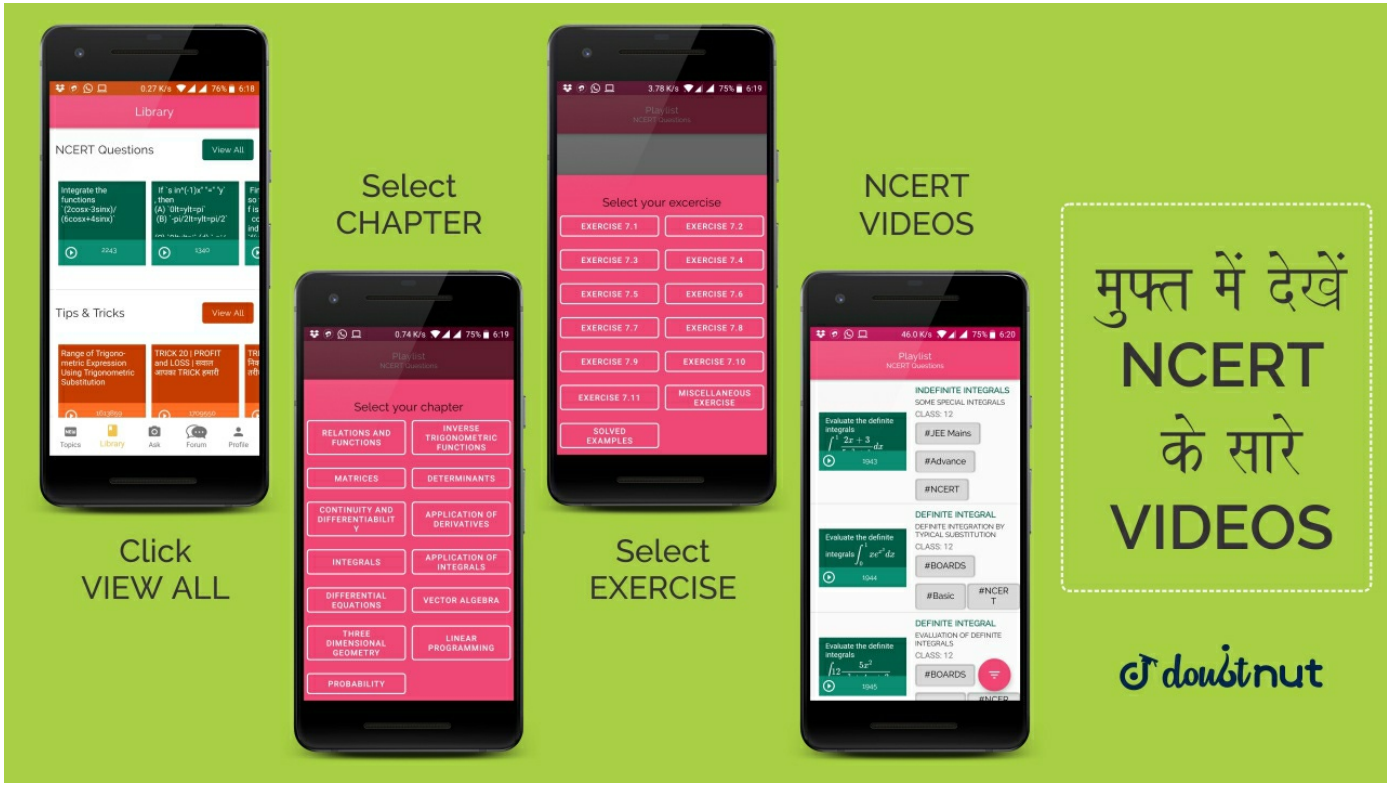
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NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 18

Find

$$\int \log x dx$$

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294	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 20 Find $\int \frac{x \sin^{-1} x}{\sqrt{1-x^2}} dx$ ▶ Watch Free Video Solution on Doubtnut
295	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 21 Find $\int e^x \sin x dx$ ▶ Watch Free Video Solution on Doubtnut
296	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 22 Find (i) $\int e^x \left(\tan^{-1} x + \frac{1}{1+x^2} \right) dx$ (ii) $\int \frac{(x^2 + 1)e^x}{(1+x)^2} dx$ ▶ Watch Free Video Solution on Doubtnut

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300	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 26 Evaluate $\int_0^2 e^x dx$ ▶ Watch Free Video Solution on Doubtnut
301	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 27 Evaluate the following integrals: (i) $\int 23x^2 dx$ (ii) $\int 49 \frac{\sqrt{x}}{\left(30 - x^{\frac{3}{2}}\right)^2} dx$ (iii)

	$\int 12 \frac{x dx}{(x+1)(x+2)} \quad (\text{iv}) \quad \int_0^{\frac{\pi}{4}} \sin^3 2t \cos 2t dt$ ▶ Watch Free Video Solution on Doubtnut
302	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 28 Evaluate $\int_{-1}^1 5x^4 \sqrt{x^5 + 1} dx$ ▶ Watch Free Video Solution on Doubtnut
303	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 29 Evaluate $\int_0^1 \frac{\tan^{-1} x}{1+x^2} dx$ ▶ Watch Free Video Solution on Doubtnut
304	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 30 Evaluate $\int -12 x^3 - x dx$ ▶ Watch Free Video Solution on Doubtnut
305	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 31 Evaluate $\int_{-\frac{\pi}{4}}^{\frac{\pi}{4}} \sin^2 x dx$ ▶ Watch Free Video Solution on Doubtnut
	
	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 32

306	Evaluate $\int_0^{\pi} \frac{x \sin x}{1 + \cos^2 x} dx$ 🎥 Watch Free Video Solution on Doubtnut
307	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 33 Evaluate $\int_{-1}^1 \sin^5 x \cos^4 x dx$ 🎥 Watch Free Video Solution on Doubtnut
308	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 34 Evaluate $\int_0^{\frac{\pi}{2}} \left(\frac{\sin^4 x}{\sin^4 x + \cos^4 x} \right) dx$ 🎥 Watch Free Video Solution on Doubtnut
309	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 35 Evaluate $\int_{\frac{\pi}{6}}^{\frac{\pi}{3}} \frac{dx}{1 + \sqrt{\tan x}}$ 🎥 Watch Free Video Solution on Doubtnut
310	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 36 Evaluate $\int_0^{\frac{\pi}{2}} \log \sin x dx$ 🎥 Watch Free Video Solution on Doubtnut
311	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 37 Find $\int \cos 6x \sqrt{1 + \sin 6x} dx$ 🎥 Watch Free Video Solution on Doubtnut

312	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 38 Find $\int \frac{(x^4 - x)^{\frac{1}{4}}}{x^5} dx$ ▶ Watch Free Video Solution on Doubtnut
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314	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 40 Find $\int \left[\log(\log x) + \frac{1}{(\log x)^2} \right] dx$ ▶ Watch Free Video Solution on Doubtnut
315	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 41 Find $\int \left[\sqrt{\cot x} + \sqrt{\tan x} \right] dx$ ▶ Watch Free Video Solution on Doubtnut

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319	NCERT - CLASS 12 - CHAPTER 7 INTEGRALS - SOLVED EXAMPLES - Q 45 Find $\int x \sqrt{1 + x - x^2} dx$ ▶ Watch Free Video Solution on Doubtnut
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