

| Ques No. | Question |
|-----------|--|
| 1 - 10420 | <p>CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS</p> <p>Using integration calculate the area of the region bounded by the two parabolas $y = x^2$ and $x = y^2$</p> <p>Click to watch Free Video Solution of this question on Doubtnut</p> |
| 2 - 10493 | <p>CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS</p> <p>Find the area of the region bounded by the parabola $x^2 = 4y$ and the line $x = 4y - 2$</p> <p>Click to watch Free Video Solution of this question on Doubtnut</p> |
| 3 - 10512 | <p>CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS</p> <p>Using integration, find the area of the region enclosed between the circles $x^2 + y^2 = 1$ and $(x - 1)^2 + y^2 = 1$</p> <p>Click to watch Free Video Solution of this question on Doubtnut</p> |

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CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

4 - 10558

Find the area of that part of the circle $x^2 + y^2 = 16$ which is exterior to the parabola $y^2 = 6x$.

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CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

5 - 10573

Using integration find the area of the region bounded by the parabola $y^2 = 4x$ and the circle $4x^2 + 4y^2 = 9$

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CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

6 - 10619

Using the method of integration, find the area of the region bounded by the lines $2x + y = 4$, $3x - 2y = 6$ and $3y + 5 = 0$

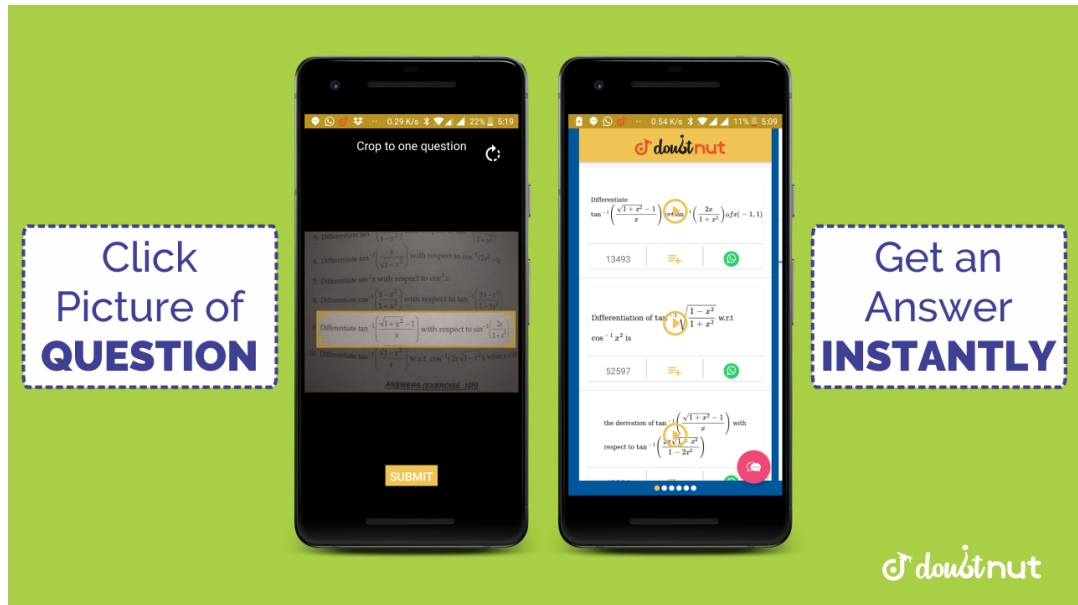
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7 - 10625

CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

Using the method of integration, find the area of the region bounded by the lines : $2x + y = 4$ $3x - 2y = 6$
 $x - 3y + 5 = 0$

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CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

8 - 10641

Using the method of integration, find the area of the region bounded by the lines $3x - 2y + 1 = 0$, $2x + 3y - 21 = 0$ and $x - 5y + 9 = 0$.

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CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

9 - 10667

Sketch the graph of $y = |x + 3|$ and evaluate the area under the curve $y = |x + 3|$ above x-axis and between $x = 6$ to $x = 0$.

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10 - 10679

CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

Find the area enclosed by the parabola $4y = 3x^2$ and the line $2y = 3x + 12$.

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CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

11 - 10683

Using integration, find the area bounded by the curve $x^2 = 4y$ and the line $x = 4y - 2$.

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CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

12 - 10697

Using integration, find the area of the triangle ABC, coordinates of whose vertices are A(4,1), B(6,6) and C(8,4)

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13 - 10698

CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

Find the area of circle $4x^2 + 4y^2 = 9$ which is interior to the parabola $x^2 = 4y$

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CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

14 - 10757

Find the area of the region in the first quadrant enclosed by

$$x - a\sqrt{y}, \text{ the line } x = \sqrt{3}y \text{ and the circle } x^2 + y^2 = 4.$$

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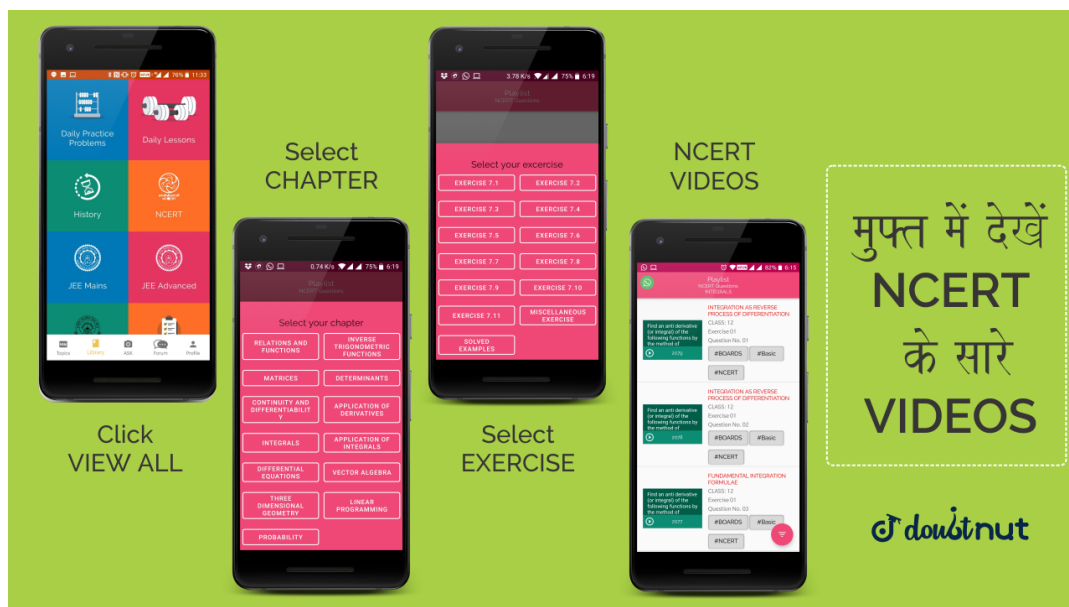
15 - 10795

Find the equation of the tangent to the curve $y = \sqrt{3x - 2}$

which is parallel to the line $4x - 2y + 5 = 0$.

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CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

16 - 10829

Find the area of the region

$$\{(x, y) : x^2 + y^2 \leq 4, x + y \geq 2\}$$

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17 - 10940

CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

Find the area of the region bounded by the parabola $y = x^2$ and $y = |x|$.

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CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

18 - 10959

Using integration, find the area of the region enclosed between the two circles $x^2 + y^2 = 4$ and $(x - 2)^2 + y^2 = 4$.

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19 - 10965

Find the area of the region included between the parabola $y^2 = x$ and the line $x + y = 2$.

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20 - 10972

CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

Find the equation of line through the intersection of lines

$3x+4y=7$ and $x-y+2=0$ and whose slope is 5.

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CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

Using integration, find the area of the following region :

21 - 11051

$$\left\{ (x, y); |x + 2| \leq y \leq \sqrt{20 - x^2} \right\}$$

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CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

Using integration, find the area of the region bounded by the

22 - 11052

lines, $4x - y + 5 = 0$; $x + y - 5 = 0$ and

$$x - 4y + 5 = 0$$

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CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

Find the areas of the region

23 - 13358

$$\{x, y\} : y^2 \leq 4x, 4x^2 + 4y^2 \leq 9\}, \text{ using integration.}$$

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CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

24 - 13359

Using integration, find the area enclosed by the parabola

$$4y = 3x^2 \text{ and the line } 2y = 3x + 12 .$$

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CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

25 - 13388

Find the area of the region in the first quadrant enclosed by the y-axis, the line $y = x$ and the circle $x^2 + y^2 = 32$, using integration.

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26 - 13409

Using integration, find the area of the region bounded by the line $xy + 2 = 0$, the curve $x = \sqrt{y}$ and $y = a^2$.

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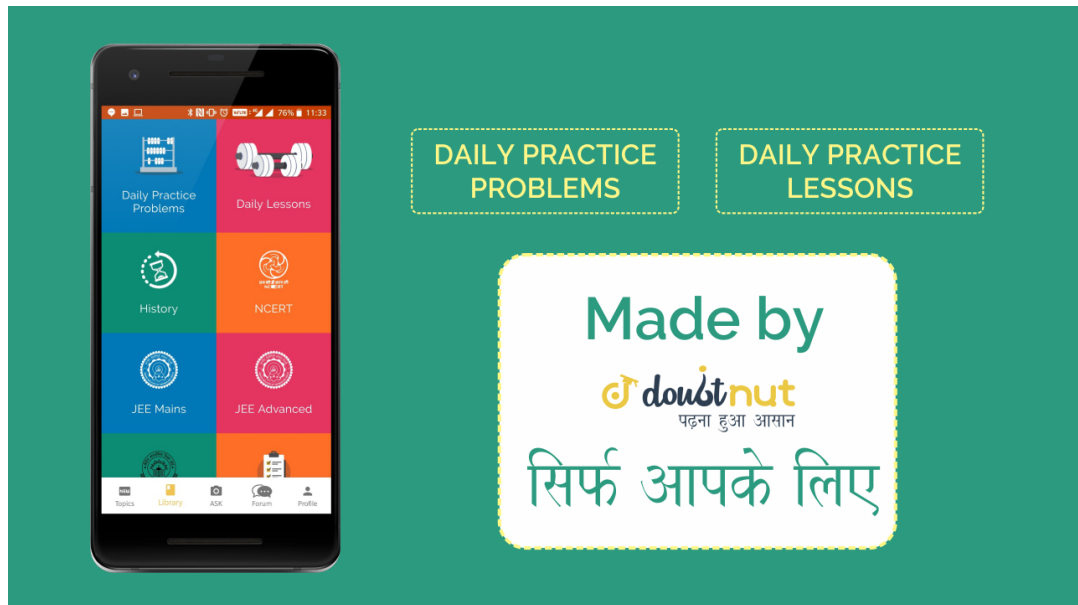
27 - 13442

CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

Prove that the curves $y^2 = 4x$ and $x^2 = 4y$ divide the area of square bounded by $x = 0$, $x = 4$, $y = 4$ and $y = 0$ into three equal parts.

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CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

28 - 13459

Using integration find the area of the region

$$\{x, y) : x^2 + y^2 \leq 2ax, y^2 \geq ax, x, y \geq 0\}.$$

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CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

29 - 13504

Using integration find the area of the region bounded by the

curves $y = \sqrt{4 - x^2}$, $x^2 + y^2 - 4x = 0$ and the x-axis.

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30 - 228056

CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

Using integration, find the area of region bounded by the triangle whose vertices are $(-2, 1)$, $(0, 4)$ and $(2, 3)$.

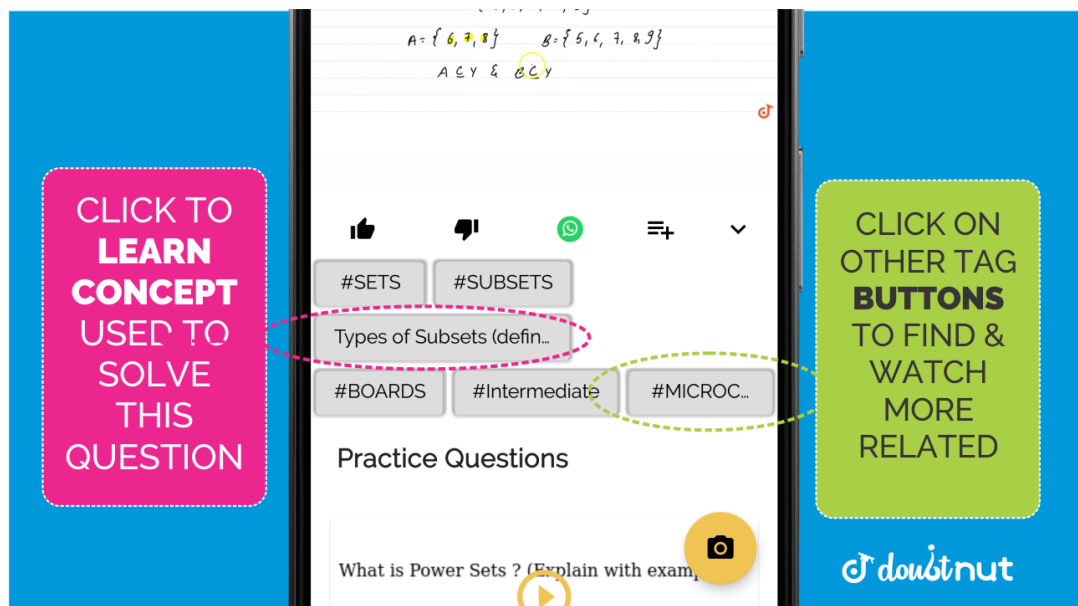
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CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

Using integration, find the area of the triangle ABC, coordinates of whose vertices are A(4,1), B(6,6) and C(8,4)

31 - 228169

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CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

Using the method of integration, find the area of the triangle ABC, coordinates of whose vertices are A (1, 2), B (2, 0) and C (4, 3).

32 - 228213

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33 - 228342

CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

Find the area enclosed between the parabola $4y = 3x^2$ and the straight line $3x - 2y + 12 = 0$

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CLASS 12 BOARDS: MOST IMPORTANT QUESTIONS - Chapter 8. APPLICATION OF INTEGRALS

Find the area bounded by the circle $x^2 + y^2 = 16$ and the line $3y = x$ in the first quadrant, using integration.

34 - 228352

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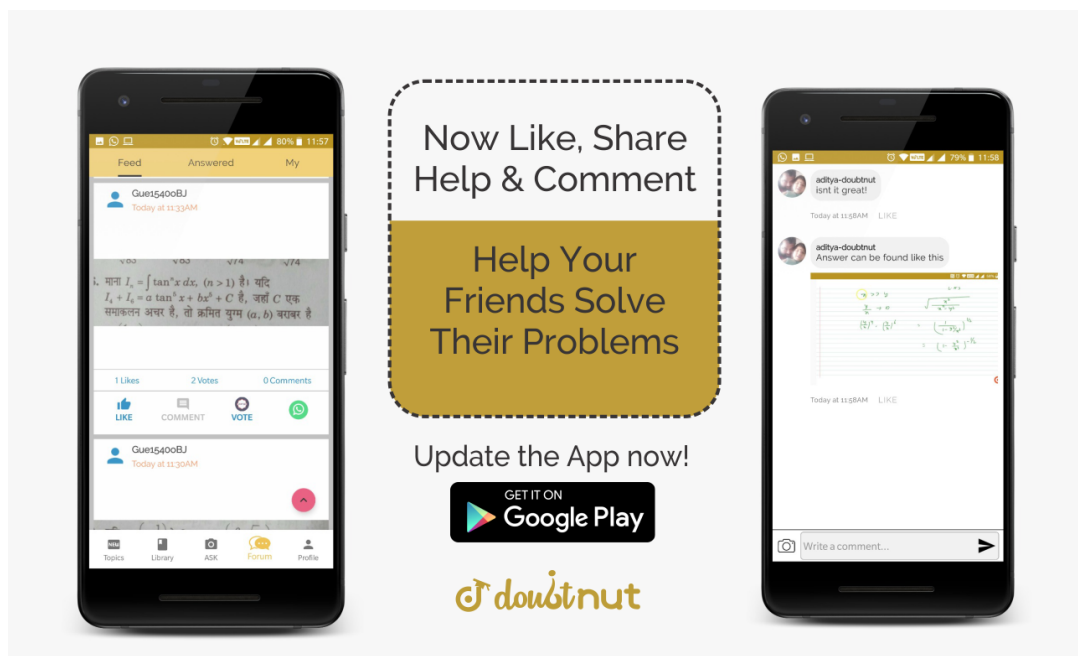
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Find the area bounded by the circle $x^2 + y^2 = 16$ and the line $\sqrt{3}y = x$ in the first quadrant, using integration.

35 - 228354

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Find the area of the region in the first quadrant enclosed by the x-axis, the line $y = x$, and the circle $x^2 + y^2 = 32$.

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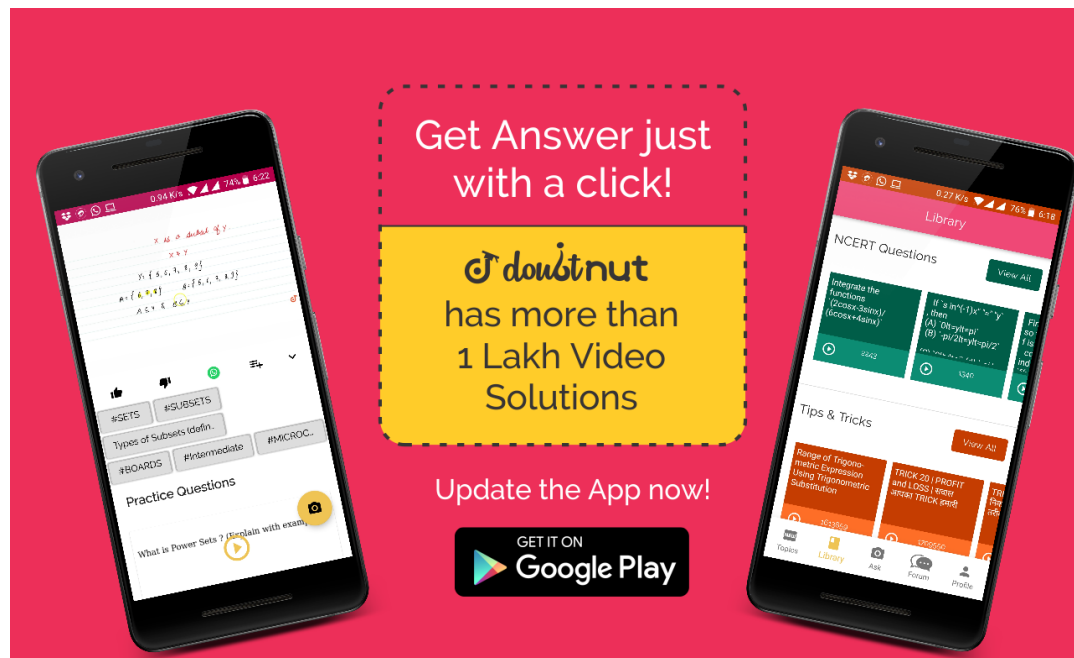
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