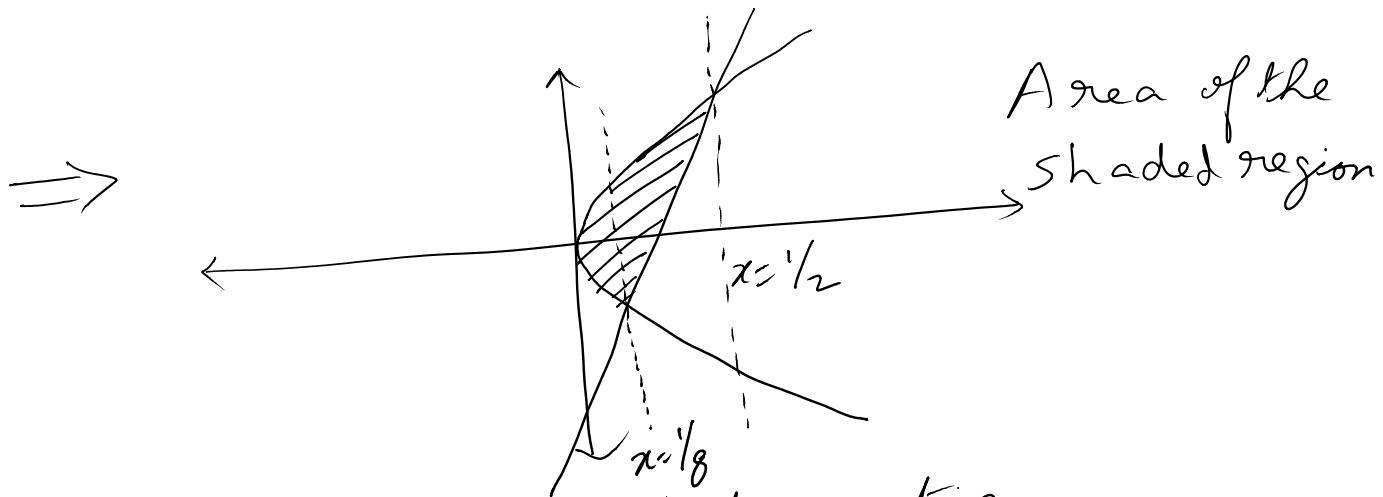
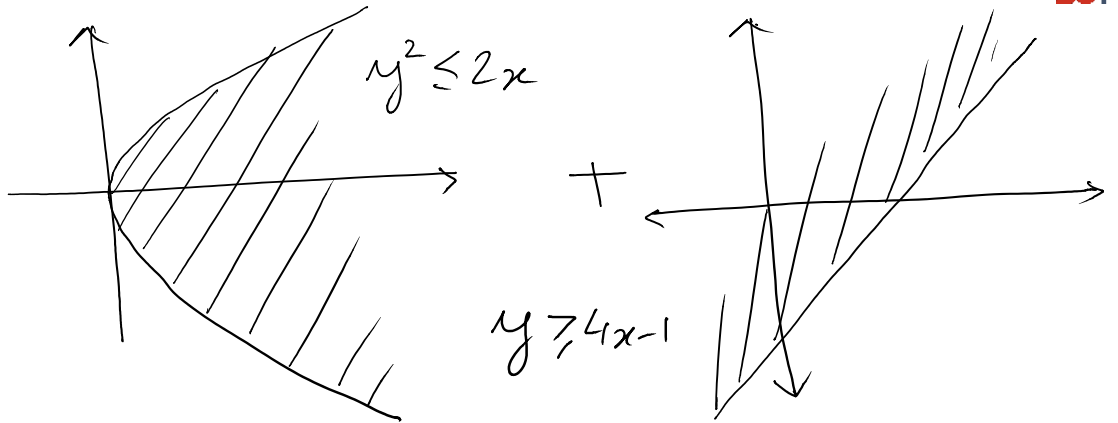


The area (in sq. units) of the region described by

$\{(x, y) : y^2 \leq 2x \text{ and } y \geq 4x - 1\}$ is:

- (1) $\frac{15}{64}$
- ✓ (2) $\frac{9}{32}$
- (3) $\frac{7}{32}$
- (4) $\frac{5}{64}$



For point of intersection
 $y^2 = 2x = (4x - 1)^2$
 $\Rightarrow x = \frac{1}{8} ; \frac{1}{2}$

$$\therefore \text{Area} = 2 \int_0^{\frac{1}{8}} \sqrt{2x} dx + \int_{\frac{1}{8}}^{\frac{1}{2}} \{\sqrt{2x} - (4x - 1)\} dx$$

\therefore Solving we get
 $\text{Area} = \frac{9}{32}$

Correct option is (2)

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