

Basic Question Practice Set 3  Questions	Definite Integration JEE Main Crash Course
1. $\int_0^{1000} e^{x-[x]} dx$ is mathongo /// mathongo //	
(3) $1000(e-1)$ mathong whathong which was a single control of the state of t	
(1) 200 ngo /// mathongo /// ma	
3. If $P = \int_0^{3\pi} f(\cos^2 x) dx$ and $Q = \int_0^{\pi} f(\cos^2 x) dx$ , then  (1) $P = Q = 0$ mathongo mathongo (2) $P = 2Q = 0$ mathongo (3) $P - 3Q = 0$ (4) $P - 5Q = 0$ (5) $P - 4Q = 0$	
4. If $\int_0^{10\pi+\alpha}  \sin x   dx = k - \cos \alpha$ , where $0 < \alpha < \pi$ , then $k = \infty$	
(1) 101 (2) 100 (3) 201 (4) none of these <b>5.</b> If $I_1 = \int_0^1 2^{x^2} dx$ , $I_2 = \int_0^1 2^{x^3} dx$ , $I_3 = \int_1^2 2^{x^2} dx$ and $I_4 = \int_1^2 2^{x^3} dx$ , then	
(1) $I_3 > I_4$ (2) $I_3 = I_4$ (2) $I_1 > I_2$ w mathong w mathong w mathong w mathong w mathong w mathong	
<b>6.</b> Let $g(x)=\int_0^x f(t)dt$ , where $\frac{1}{2}\leq f\Big(t\Big)\leq 1,\ t\in \Big[0,1\Big]$ and $0\leq f\Big(t\Big)\leq \frac{1}{2}$ for $t\in [1,2]$ , then	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
7. The value of $Lt_{x\to 0}\left\{\frac{\int_0^{x^2}\sec^2t\ dt}{x\sin x}\right\}$ is mathongo	
(1) 0 (2) 3 (3) 2 (4) 1 (4) 1 (5) $t^2f(t) dt = 1 - \sin x  \forall  x \in (0, \pi/2), \text{ then } f\left(\frac{1}{\sqrt{3}}\right) \text{ is :}$	
9. $f(x) = \sin x + \int_0^x f'(t) \left(2 \sin t - \sin^2 t\right) dt$ , then $f(x)$ is	
10. If $f(x) = \frac{1}{\pi} \int_0^{\frac{\pi}{2}} \frac{\sin^2 n\theta}{\sin^2 \theta} d\theta$ $(n \in N)$ , then the value of $\frac{f(15) + f(3)}{f(15) - f(a)}$	