

1. The degree of the differential equation $2\left(\frac{d^2y}{dx^2}\right) + 2\left(\frac{dy}{dx}\right) = x \sin\left(\frac{d^2y}{dx^2}\right)$ mathons with mathon with mathons with mathons with mathons with mathons with mathon with mathons with mathons with mathons with mathons with mathon wi	
The degree of the differential equation $2\left(\frac{1}{dx^2}\right) + 2\left(\frac{1}{dx}\right) = x \sin\left(\frac{1}{dx^2}\right)$	
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Consider the differential equation $\left[1+\left(\frac{dy}{dx}\right)^2\right]^{3/2}=k\frac{d^2y}{dx^2}$, find the degree and the order of differential equation - mathons with the degree and the order of differential equation - mathons with the degree and the order of differential equation - mathons with the degree and the order of differential equation - mathons with the degree and the order of differential equation - mathons with the degree and the order of differential equation - mathons with the degree and the order of differential equation - mathons with the degree and the order of differential equation - mathons with the degree and the order of differential equation - mathons with the degree and the order of differential equation - mathons with the degree and the order of differential equation - mathons with the degree and the order of differential equation - mathons with the degree and the order of differential equation - mathons with the degree and the order of differential equation - mathons with the degree and the order of differential equation - mathons with the degree and the order of differential equation - mathons with the degree and the order of differential equation - mathons with the degree and the order of differential equation - mathons with the degree and the order of differential equation - mathons with the degree and the degree of the degre	
(1) 2,2	
(3) 2,3 (4) None of these	
3. The order of the differential equation of the family of curves $y = k_1 2^{k_2 x} + k_3 3^{x+k_4}$ is (where, k_1, k_2, k_3, k_4 are arbitrary constants)	
(1) 4 (2) 5 (3) 3 (4) 6	
4. The order of differential equation of all parabolas having directrix parallel to x-axis is	
(1) 3	
/// (3) 4 nongo /// mathongo	
5. If the order of the differential equation of the family of circles touching the x -axis at the origin is k , then $2k$ is equal to	
6. The solution to the differential equation $\frac{dy}{dx} = e^{3x-2y} + x^2e^{-2y}$ is $(1) e^{2y} = e^{3x} + x^3 + C$ $(2) 3e^{2y} = 2(e^{3x} + x^3) + C$ $(3) e^{2y} = 2(e^{3x} + x^3) + C$ $(4) e^{2y} = e^{3x} + x^3 + C$	
(1) $e^{2y} = e^{3x} + x^3 + C$ (2) $3e^{2y} = 2(e^{3x} + x^3) + c$ (3) $e^{3x+2y} = x^3 + c$ (4) None of these	
$q = \frac{1}{2}$	
1. The equation of the curve through the point $(1, 0)$ and whose slope is $\frac{1}{x^2+x}$, is: $(1) 2x + (y-1)(x+1) = 0$ $(2) 2x - (y-1)(x+1) = 0$	
(3) $2x + (y - 1)(x - 1) = 0$ (4) None of these	
8. The solution of the differential equation $\frac{dy}{dx} + \frac{y}{x} = \frac{1}{(1+\ln x + \ln y)^2}$ is (where, c is an arbitrary constant) mathongo where mathematical mathematical mathematical mathon mathon mathon mathematical mathema	
(1)	
(3) $xy(1 + \ln(xy)) = \frac{x^2}{2} + c_{10}$ mathongo we mathongo (4) $xy(1 + \ln(xy)) = \frac{x}{2} + c_{10}$ mathongo we mathon which we mathon we mathon which we mathon we mathon which we will be a supplication of the mathon which we will be a supplication of the mathon which we will be a supplication of the mathon which we will be a supplication of the mathon which we will be a supplication of the mathon which we will be a supplication of the mathon which we will be a supplication of the mathon which we will be a supplication of the mathon which we will be a supplication of the mathon which we will be a supplication of the mathon which we will be a supplication of the mathon which we will be a supplication of the mathon which we will be a supplication of the mathon which we will be a supplication of the weak with the mathon which we will be a supplication of the weak will be a supplication of the weak will be a supplication of the weak will be a supplication of the wea	
9. The general solution of the differential equation $\frac{dy}{dx} + \sin\left(\frac{x+y}{2}\right) = \sin\left(\frac{x-y}{2}\right)$ is (where c is an arbitrary constant)	
(1) $\ln \tan\left(\frac{y}{2}\right) = c - 2\sin x$ (2) $\ln \tan\left(\frac{y}{4}\right) = c - 2\sin\left(\frac{x}{2}\right)$ mathongo (2) $\ln \tan\left(\frac{y}{4}\right) = c - 2\sin\left(\frac{x}{2}\right)$ mathongo (3) $\ln \tan\left(\frac{y}{4}\right) = c - 2\sin\left(\frac{x}{2}\right)$	
(3) $\ln \tan\left(\frac{y}{2} + \frac{\pi}{4}\right) = c - 2\sin x$ (4) $\ln \tan\left(\frac{y}{4} + \frac{\pi}{4}\right) = c - 2\sin\left(\frac{x}{2}\right)$	
10. Let $y = y(x)$ be solution of the differential equation $\log_e\left(\frac{dy}{dx}\right) = 3x + 4y$, with $y(0) = 0$. If $y\left(-\frac{2}{3}\log_e 2\right) = \alpha\log_e 2$ then the value of α is equal to:	
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