degree
$$\frac{\mathrm{d^{2}}y }{\mathrm{d} x^{2}}+a^{2}x=0$$

[MTH421] The differential equation corresponding to $y=ae^{3x}+be^{x}$ is
$$\frac{\mathrm{d^{2}} y}{\mathrm{d} x^{2}}-4\frac{\mathrm{d} y}{\mathrm{d} x}+3y=0$$

[MTH421] _____ is an example of a non-linear differential equation of 2nd order and 2nd degree
$$\left [1+\left (\frac{\mathrm{d} y}{\mathrm{d} x} \right)^{2} \right]^{\frac{3}{2}}=\frac{\mathrm{d^{2}}y }{\mathrm{d} x^{2}}$$

[MTH421] The order and degree of the differential equation $\cos x \frac{\mathrm{d^{2}}y }{\mathrm{d} x^{2}} + \sin x\left (\frac{\mathrm{d} y}{\mathrm{d} x} \right)^{2}+8y=\tan x$
2,1

[MTH421] The order and degree of the differential equation $L\frac{\mathrm{d^{2}}q }{\mathrm{d} t^{2}} +R\frac{\mathrm{d} q}{\mathrm{d} t}+\frac{q}{c}=E\sin wt$
2,1

[MTH421] The solution of the differential equation $\left (y+x \right)^{2}\frac{\mathrm{d} y}{\mathrm{d} x}=a^{2}$ is given by
$y+x=a \tan \left (\frac{y-c}{a}\right)$

[MTH421] _____ is an example of non-linear differential equation of 2nd order and 3rd degree
$$x^{2}\left (\frac{\mathrm{d^{2}}y }{\mathrm{d} x^{2}} \right)^{3}+y\left (\frac{\mathrm{d}y }{\mathrm{d} x} \right)^{4}+y^{4}=0$$

[MTH421] The differential equation of which $y'^{2}=4a\left (x+a \right)$ is
$y^{2} \left (\frac{\mathrm{d} y}{\mathrm{d} x} \right)^{2}+2xy\frac{\mathrm{d} y}{\mathrm{d} x}-y^{2}=0$

[MTH421] An equation which involves _____ co-efficient is called a differential equation
Differential

[MTH421] The order and degree of the differential equation $\left [1+\left (\frac{\mathrm{d} y}{\mathrm{d} x} \right)^{2} \right]^{3}=\left (\frac{\mathrm{d^{2}}y }{\mathrm{d} x^{2}} \right)^{2}$
2,2