8. $2x\,dy + \cos(x)\,dx = 0$

1. ✓
2. $P\frac{dP}{d\theta}$ ✓
3. ✓ lineal

(I) $2x\frac{dy}{dx} + \cos(x) = 0$ ✓

(II) $2x + \cos(x)\frac{dx}{dy} = 0$ ✗

6. $\frac{d^2y}{dx^2} + \frac{dy}{dx} = \ln|y|$ EDO

Orden 2
grado 1

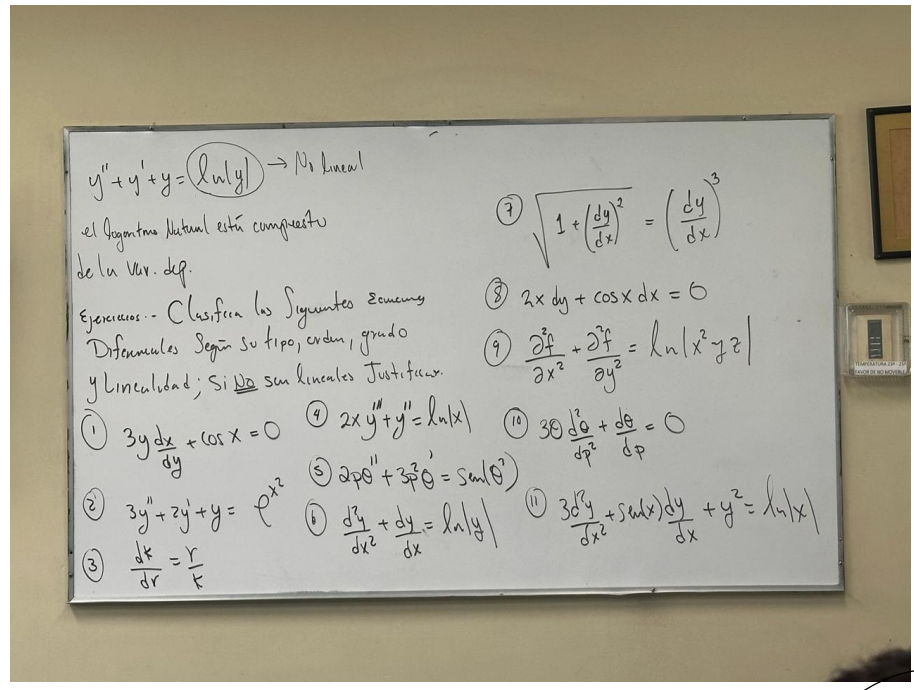
1. ✓
2. $P\frac{dP}{d\theta}$ ✓
3. ✗ No es lineal
$\ln|y|$ ✗

7. $\sqrt{1+\left(\frac{dy}{dx}\right)^2} = \left(\frac{dy}{dx}\right)^3$

1. ✗ No es lineal

$\sqrt{1+(y')^2} = (y')^3$

Orden : 1 EDO
grado : 3



4. $(4x)(y''')+(y'')=(\ln(x))$

$4x\frac{d^3y}{dx^3} + \frac{d^2y}{dx^2} = \ln(x)$

1. ✓
2. $P\frac{dP}{d\theta}$ ✓ lineal
3. ✓
5. $2p\theta'' + 3p^2\theta' = \text{sen}(\theta^3)$
1. ✓
2. $P\frac{dP}{d\theta}$ ✓

$2p\frac{d^2\theta}{dp^2} + 3p^2\frac{d\theta}{dp} = \text{sen}(\theta^3)$

3. ✗ No es lineal

9. $\frac{d^2f}{dx^2} + \frac{d^2f}{dy^2} = \ln|x^2yz|$

EDP.

1 ✓
2 $P\frac{dP}{d\theta}$ ✓
3. ✓

$\frac{d^2f}{dx^2} + \frac{d^2f}{dy^2} + 0\frac{df}{dt}$

① $3y\frac{dx}{dy} + \cos(x) = 0$ ~~$(3)(y'') + (2)(y') + (y) = (e^{x^2})$~~

No es lineal

EDO, ~~EDP~~ Orden 1, Grado 1.

1. ✓
2. ✓
3. ✗

$P\frac{dP}{d\theta}$

② $3y'' + 2y' + y = e^{x^2}$ $(3)(y'') + (2)(y') + (y) = (e^{x^2})$

Orden 2 EDO. es lineal
Grado 1

③ $\frac{dK}{dr} = \frac{r}{K}$ 1. ✓ 2. ✗

$K\,dK/dr = r$

$K\frac{dK}{dr} = r$

No es lineal