

Quiz 4

Name: _____

Do not solve any of these equations!

1. For these differential equations, (i) identify the order of the equation, and (ii) decide whether the equation is linear or non-linear.

(a) $y''' + y' + y = 0$

(b) $\frac{dy}{dx} = y^2$

2. For these differential equations, identify whether they are pure-time, autonomous, or neither.

(a) $\frac{dy}{dt} = 10t^4 + e^t$

(c) $y' = \sin(y)$

(b) $y' = ty$