

Exponential Models

$$y = b^x$$

$$y = 2^x$$

$$0 \quad 2^0 = 1$$

$$1 \quad 2^1 = 2$$

$$2 \quad 2^2 = 4$$

$$3 \quad 2^3 = 8$$

$$\dots \dots$$

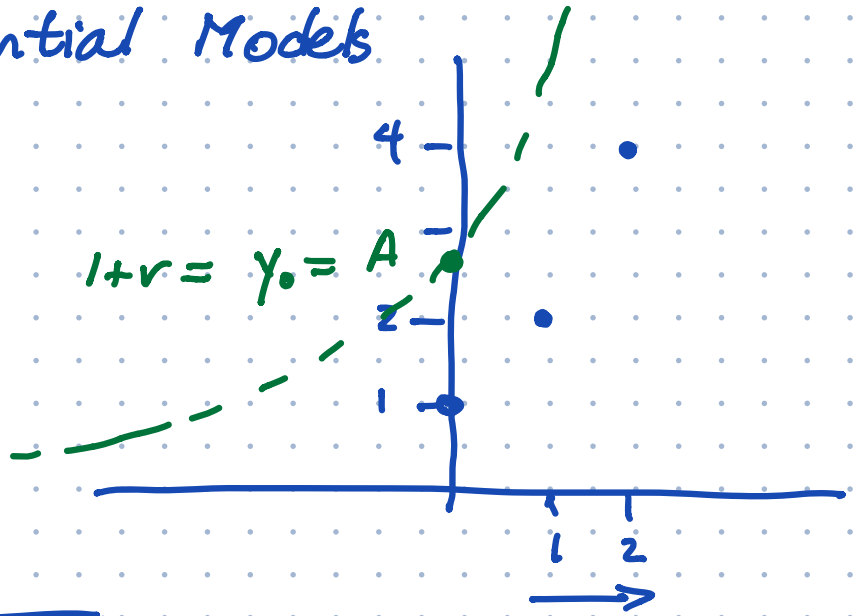
$$8 \quad 256$$

$$16 \quad 65,536$$

$$24 \quad 16,777,216$$

$$64 \quad 1,844,674,407,000,000,000$$

$$2^{100} + \dots$$



$$\frac{b^x - 1}{b - 1}$$

Multiplicative

$$e = 2.71828182 \dots$$

$$- \quad y = A \cdot b^x$$

$$- \quad y = y_0 e^{kt}$$

$$- \quad y = y_0 (1+r)^t$$

$$P = P_0 (1+r)^t$$

rate of growth

$$1 + 0.04$$

$$1.04$$