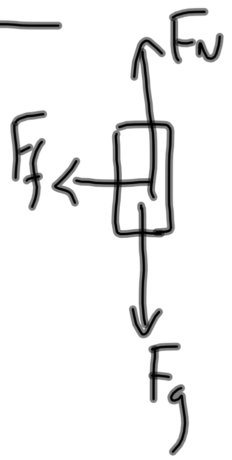
Review

30.



$$\vec{F}_{net} = m\vec{a}$$

$$-F_f = ma$$

$$-\mu F_N = ma$$

$$-\mu F_g = ma$$

$$-\mu \cancel{m} g = \cancel{m} a$$

$$a = -\mu g$$

$v_1 = 2.0 m/s$

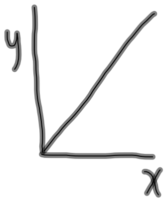
$\mu = 0.20$

$v_2 = 0$

$\Delta d = ??$

$a = ??$

Graphical Analysis of Data



$y \propto x$ (proportionality statement)

$y = kx$ (general equation)

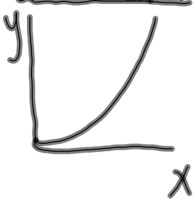
$(y = mx + b)$ where k is the proportionality constant

$k = \frac{y}{x}$

$k = 52$ (lets say)

$y = 52x$ (specific equation)

Power Curve



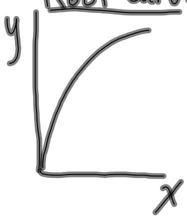
$y \propto x^n$

$y = kx^n$

$(y = mx + b)$

A plot of y vs x^n will be linear with a slope of k and a y-int of zero)

Root Curve



$y \propto \sqrt[n]{x}$

$y = k\sqrt[n]{x}$

$(y = mx + b)$

A plot of y vs $\sqrt[n]{x}$ will be linear with a slope of k and a y-int of zero

Inverse Curve

$y \propto \frac{1}{x^n}$

$y = k\left(\frac{1}{x^n}\right)$

$y = mx + b$

A plot of y vs $\frac{1}{x^n}$ will be linear with a slope of k and a y-int of zero