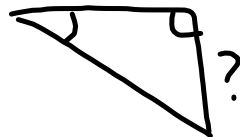
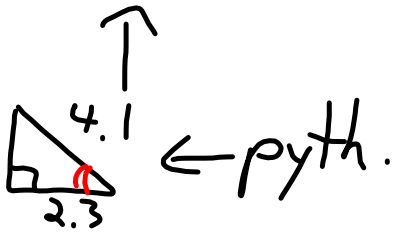


TRIG

$$a^2 + b^2 = c^2$$

SOH CAH TOA



$$* \frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

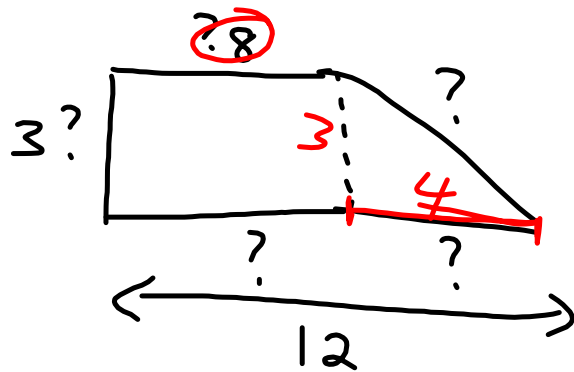
$$* \underline{a^2} = b^2 + c^2 - 2bc \cos \underline{A}$$

$$* \underline{\cos A} = \frac{b^2 + c^2 - a^2}{2bc}$$



# Measurement

→ Composite figures → 2D  
 " shapes → 3D



# Chapter 5 Graphical Models

Linear



$$y = mx + b$$



Quad



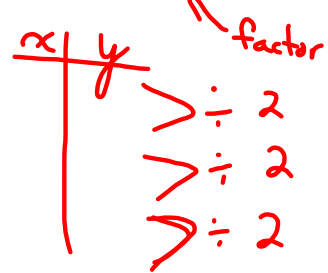
$$y = Ax^2 + Bx + C$$



Exp.



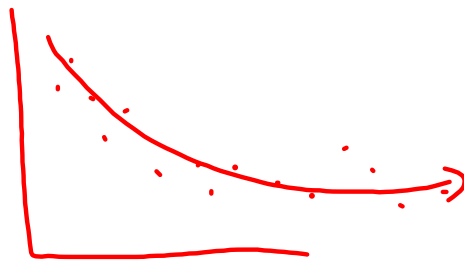
$$y = ab^x$$



G.C.

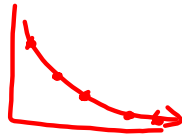
→ estimate

$$b > 1$$
$$0 < b < 1$$



"r" → turn on diagnostics

$r = 1$  ← model perfect



Strong, moderate, weak  
correlation

$$r = 0.5$$

positive / negative

## Algebraic Models

Exponent rules

$$x^2 \cdot x^3 = x^{2+3} = x^5$$

$$\frac{x^4}{x^1} = x^{4-1} = x^3$$

$$(x^2)^3 = x^6$$

$$x^{-4} = \frac{1}{x^4}$$

$$x^0 = 1$$

$$\frac{(3xy^2)^3}{2xy} = \frac{27x^3y^6}{2xy} = \frac{27x^2y^5}{2}$$

$$y = 3x + 5$$
$$y - 5 = 3x$$
$$\frac{y - 5}{3} = x$$

$$\underline{2}^{2x+4} = \underline{2}^{x-5}$$

$$\begin{aligned}\therefore 2x+4 &= x-5 \\ 2x-1x &= -5-4 \\ \boxed{x &= -9}\end{aligned}$$

$$2^{4x-5} = 4^{x+1}$$

$$\underline{2}^{4x-5} = \underline{2}^{2(x+1)}$$

$$\therefore 4x-5 = 2(x+1)$$

$$4x-5 = 2x+2$$

$$4x-2x = 2+5$$

$$2x = 7$$

$$\boxed{x = \frac{7}{2}}$$