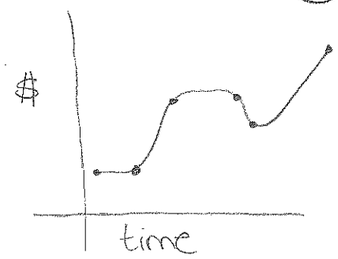
M8 Ch 7 Review
Data Analysis & Probability

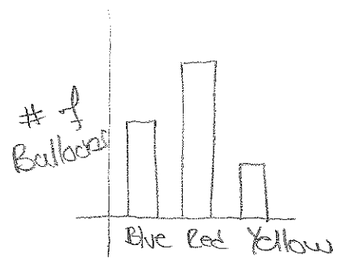
Name _____

Blk _____

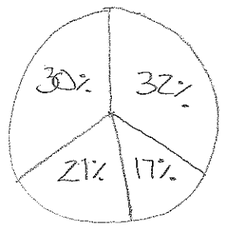
7.1 Chosing the right graph



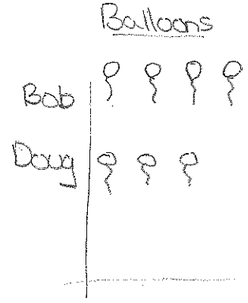
Line Graph
- comparing a quantity to another quantity
- numbers on both axis
- often x-axis is 'time'



Bar Graph
- comparing a category to a quantity
- numbers on y-axis, categories on x-axis



Circle Graph
- comparing parts of a whole
- often written in percent
- total = 100%

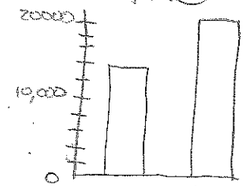


Pictograph
- uses pictures to represent data

7.2 Misrepresenting Data

→ the easiest way to screw data is to alter the values on the axis.

hard to see a difference



easy to see the difference

* All axis must start at zero and increase at a constant rate

0, 5, 10, 15, 20, 25 ← YES

0, 1, 2, 10, 50, 100 ← NO

7.3 Probability of Independant Events

HW: A: 7, 8, 10, 11 B: 12, 13, 14, 15 C: 2, 3, 4, 5, 6

Probability: likliness of an event occuring
: how probable it is that something will happen
: written as a fraction or percent (usually)

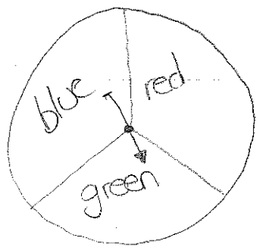
Ex: Getting a heads and rolling a four (1 die)

heads or tails: $\frac{1}{2}$ ← ways of getting your outcome → 1
total possible outcomes → 6

rolling a 4 / rolling 1,2,3,4,5,6

Multiply the Probabilities $\frac{1}{2} \times \frac{1}{6} = \frac{1 \cdot 1}{2 \cdot 6} = \boxed{\frac{1}{12}}$

Ex:



Probability of spinning a red $\frac{1}{3}$ then a blue $\frac{1}{3}$ $\boxed{\frac{1}{3} \times \frac{1}{3} = \frac{1}{9}}$

1st Spin → / 2nd Spin ↓	R	B	6
R	RR	RB	R6
B	BR	BB	B6
6	6R	6B	66

$\boxed{\frac{1}{9}}$

& (×) And Vs. Or (+)

if the events both must occur ("and" statements); you multiply the probabilities

if the either of the events must occur ("or" statements); you add the probabilities

tossing a head and spinning red $\frac{1}{2} \times \frac{1}{3} = \boxed{\frac{1}{6}}$

tossing a head or spinning red $\frac{1}{2} + \frac{1}{3} \rightarrow \frac{3}{6} + \frac{2}{6} = \boxed{\frac{5}{6}}$