

BE-1A THURSDAY 10-11-07

- ① Convert $\frac{1}{6}$ to a decimal by long division. "moon the fraction"
- ② Convert your answer to ① to a per cent "per hundred"

$$\begin{array}{r} 0.1\bar{6} \\ 6 \overline{) 1.000} \\ \underline{6} \\ 40 \\ \underline{36} \\ 40 \end{array}$$

$$= \boxed{0.1\bar{6}} = .166666\dots$$

$$\boxed{\begin{array}{l} = 16.\bar{6} \% \\ \text{or} \\ \approx 17\% \end{array}}$$

↑
per
hundred

1.
A single die (plural dice) is
A small cube. 

How many sides does a cube have?

What is the Probability of
rolling a 4 using one die?

The Probability of an event is
WRITTEN $P(\text{event}) = \frac{\text{Number of successes}}{\text{total number of successes and failures}}$

$$P(4) = \frac{1}{6} = 16.7\%$$

A good place to start a
probability problem is to find the
TOTAL!

A probability of 0% means there is no chance of it happening.

$$P(\text{rolling a 7 on a single die}) = \frac{0}{6} = 0\%$$

A probability of 1 or 100% means the event is certain to happen.

$$P(\text{rolling a 1, 2, 3, 4, 5, or 6}) = \frac{6}{6} = 1 = 100\%$$

If you add the probability of an event happening AND of the event not happening, it will = 1 = certainty

$$\begin{array}{l} \text{Ex) } P(4) = \frac{1}{6} \\ P(\text{NOT } 4) = \frac{5}{6} \end{array} \quad \left. \vphantom{\begin{array}{l} P(4) = \frac{1}{6} \\ P(\text{NOT } 4) = \frac{5}{6} \end{array}} \right\} \frac{1}{6} + \frac{5}{6} = 1$$

⚡
MUST BE A
4 OR NOT A 4

Ex 1
Pg 96

②

Find $P(\text{Even number on a die})$

$$P(\text{even}) = \frac{\text{Successes}}{\text{Total}} \Rightarrow \frac{2, 4, \text{ or } 6}{1, 2, 3, 4, 5, \text{ or } 6} = \frac{3}{6} = \frac{1}{2}$$

$$\boxed{P(\text{even}) = \frac{1}{2}} = 50\% \quad \text{JUST AS LIKELY TO OCCUR AS NOT OCCUR}$$

⑥ bowl has 5 red chips, 7 blue chips, 6 yellow chips, and 10 green chips. One chip is drawn at random.

$$P(\text{blue}) = \frac{7}{28} = \boxed{\frac{1}{4}} = 25\%$$

$$P(\text{red or yellow}) = \boxed{\frac{11}{28}} = 39\%$$

$$P(\text{not green}) = \frac{18}{28} = \boxed{\frac{9}{14}} = 64\%$$

• Read Ch 2-6 • Pg 99 14 to 19