

BE-1A | WEDNESDAY 11-1-06

CONVERT TO A DECIMAL
USE LONG DIVISION

① $\frac{1}{4}$

② $\frac{5}{8}$

③ $\frac{9}{18}$

④ CONVERT THE ANSWERS IN
①, ②, ③ TO A PER CENT.

$$\textcircled{1} \quad \frac{1}{4} \Rightarrow 4 \overline{) 1.00} \begin{array}{r} 0.25 \\ 8 \\ \hline 20 \\ 20 \\ \hline 0 \end{array}$$

$$\boxed{\frac{1}{4} = 0.25 = 25\%}$$

PER. CENT = PER ONE HUNDRED

= 2 decimal places

$$\textcircled{2} \quad \frac{5}{8} \Rightarrow 8 \overline{) 5.0000} \begin{array}{r} 0.625 \\ 48 \\ \hline 20 \\ 16 \\ \hline 40 \end{array}$$

$$\boxed{\frac{5}{8} = 0.625 = 62.5\%}$$

$$\textcircled{3} \quad \frac{9}{10} = \boxed{\frac{1}{2} = 0.5 = 50\%}$$

$$\begin{array}{r} 0.5 \\ 2 \overline{) 1.0} \\ -10 \quad \checkmark \\ \hline 0 \end{array}$$

WHAT IS THE PROBABILITY THAT A STUDENT IN THIS CLASS IS LEFT-HANDED?



THE FIRST THING TO DO IN A PROBABILITY PROBLEM IS FIND THE TOTAL OF WHATEVER YOU ARE WORKING ON.

LEFT HANDED

TOTAL # STUDENTS
IN CLASS

Ch. 2-6 Probability AND Odds

(2)

GOAL: BE ABLE TO FIND THE
PROBABILITY AND ODDS OF A
SINGLE EVENT.

SIMPLE
EVENT

A SINGLE EVENT

EX) GETTING "HEADS" ON A
COIN FLIP.

EX) GETTING RAIN ON SATURDAY

EX) BEING LEFT-HANDED

PROBABILITY
OF EVENT C

$$P(a) = \frac{\# \text{ of successes}}{\text{TOTAL \# OF POSSIBLE OUTCOMES}}$$

$$\text{EX) } P(\text{STUDENT IN CLASS LEFT-HANDED}) = \frac{\# \text{ LEFT-HANDED STUDENTS}}{\text{TOTAL \# IN CLASS}}$$

*
ANSWER IS OK AS
A FRACTION OR AS A
PERCENT

(3)

EX 1 Pg 96 (A) $P(\text{EVEN NUMBER ON A die roll})$



$$P(\text{EVEN NUMBER}) = \frac{3}{6} = \frac{1}{2} \text{ or } 50\%$$



**ALWAYS SIMPLIFY!
IF YOU CAN**

(B) BOWL WITH 5 red chips, 7 blue chips, 6 yellow chips, 10 green chips.

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

(C) SAME BOWL, ALL chips REPLACED

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

(d) SAME bowl, ACR $P(\text{NOT green})?$

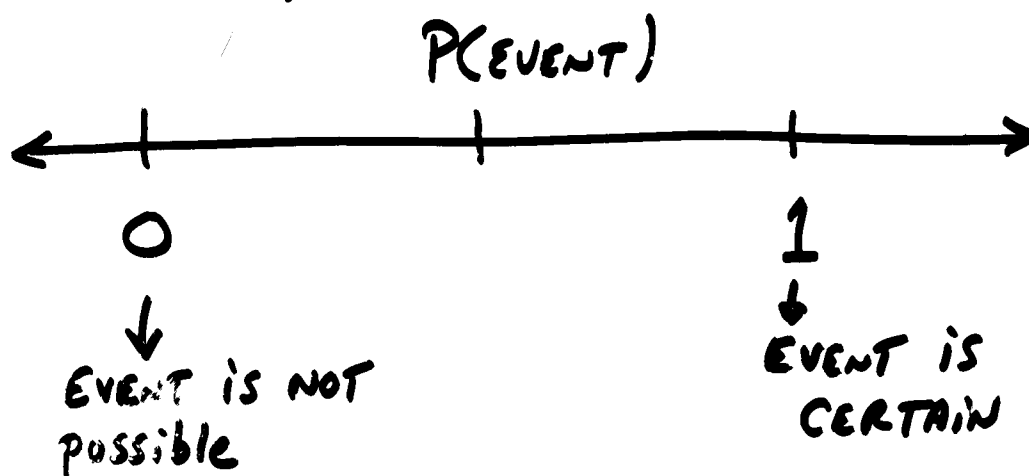
$$P(\text{NOT green}) = \frac{18}{28} = \frac{9}{14} \text{ or } \sim 64\%$$

④

Probability goes from 0 to 1.

$$P(\text{rolling a 7 on a die}) = 0$$

$$P(\text{rolling AN EVEN or ODD}) = 1$$



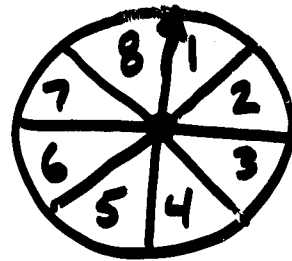
$$\text{ODDS} = \frac{\# \text{ OF SUCCESSSES}}{\# \text{ OF FAILURES}}$$

$$\text{EX) } P(\text{rolling four on a die}) = \frac{1}{6}$$

$$\text{ODDS } \underbrace{\text{OF}}_{\text{=}} \text{ROLLING FOUR} = \frac{1}{5} \text{ or } 1:5$$

$$\text{ODDS } \underbrace{\text{AGAINST}}_{\text{=}} \text{A FOUR} = \frac{5}{1} \leftarrow \begin{array}{l} \text{SUCCESS IS} \\ \text{NOT ROLLING} \\ \text{A FOUR} \end{array}$$

EX) GIVEN A SPINNER:



FIND: $P(5)$

ODDS OF A 5

$$P(5) = \frac{1}{8} \quad \text{ODDS OF A 5} = \frac{1}{7}$$

$$\text{FIND: ODDS AGAINST A 5} = \frac{7}{1}$$

TIPS FOR PROBABILITY WITH CARDS

- # CARDS IN A STANDARD DECK
52
- # SUITS
4
- # CARDS PER SUIT
13
- # RED CARDS (AND # OF BLACK)
26

6

Group Practice:

Page 98 # 4, 5, 8, 11

HW: READ Ch 2-6

Page 99 # 14→17

22→25

28→31
