

Lesson 14: Calculating Probability
Using Stats (Experimental
Probability)

Theoretical Probability (mathematical reasoning)

$$P(E) = \frac{\# \text{ of fav outcomes}}{\text{total \# of poss outcomes}}$$

R.E. = flipping a coin

Event A = flipping a tails

$$P(A) = \frac{1}{2}$$

$$P(A) = 0.5$$

nota bene: the more draws (flipping) (w
replacement) doesn't change the probability
of an event happening

Theoretical Probability (mathematical reasoning)

$$P(E) = \frac{\# \text{ of fav outcomes}}{\text{total } \# \text{ of poss outcomes}}$$

Experimental Probability (stats)

$$P(E) = \frac{\# \text{ of times outcome occurs}}{\# \text{ of times experiment has been repeated}}$$

→ can be different than
 the more exp, the more accurate and closer

R.E Flipping a coin
 Event A getting a tails

{ heads, heads }
 $P(A) = \frac{0}{9}$
 0%

P 224

8.2: what prob is best for calculating.

- a) - exp
- b) - theo

- c) exp - stats
- d) theo

R.E tossing a die 5 times

P 225

#8.4

"looking @ that stats"

	J	Y
H	19	15
W	11	17
Total	30	32

$$P(W, \text{yon}) = \frac{17}{32}$$

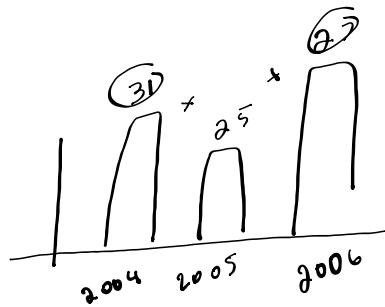
$$P(W, \text{yon}) = 0.53$$

$$= 53\%$$

P 226

#9.5

$$P(2007) = \frac{29}{190}$$



http://digfir-published.macmillanusa.com/stats_applet/stats_applet_10_prob.html
<https://www.explorelarning.com/index.cfm?method=cResource.dspView&ResourceID=310>