

Wednesday, October 17, 2012

No TISK or Mental Math this week.

You will fill out a post-it note for today.

You **MUST** bring your **TEXTBOOK** tomorrow.

Homework: Review your notes

Homework Check

9) 0.319

10) 0.35

11) 1

12) 1

13) 0.465

14) 0.535

15)

Outcome	Jamal	Elroy	Tina	Mel	Gina
Probability	10%	20%	20%	20%	30%

16) The probability it won't be built in Zone C is 0.52.

17) The probability of not winning anything is 0.56.

18) The probabilities must have a sum of 1, but they do not have to be equal. For example, one could be 0.4 and the other could be 0.6.

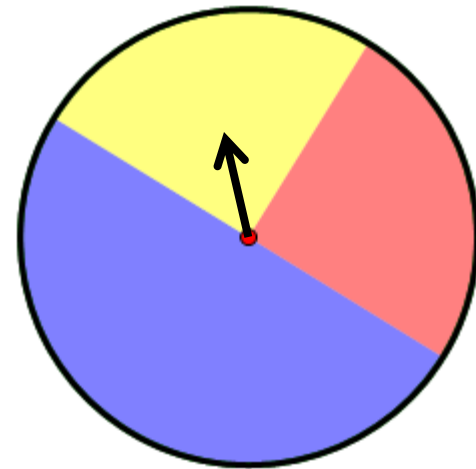
§9-2 Experimental Probability

- Experimental probability is the probability that a *nonrandom* event will occur based on *previous trials*.
- The formula for Experimental Probability is:
 - $P(\text{event}) = \frac{\text{number of successful trials}}{\text{number of trials}}$

§9-2 Experimental Probability

- Sometimes, experimental probability is used with random events to determine how close the probability is to the expected value or when it isn't clear what the equally likely chances are.
 - After 1000 spins of the spinner, the following information was recorded. What is the experimental probability of the spinner landing on red?

Outcome	Blue	Red	Yellow
Spins	448	267	285



$$P(\text{event}) = \frac{\text{number of successful trials}}{\text{number of trials}}$$

$$P(\text{red}) = \frac{267}{1000} = 0.267 = 26.7\%$$

§9-2 Experimental Probability

- Sometimes, you will need to estimate a normal probability using experimental data.
- For instance, the table below shows the results of several spins of a spinner. Estimate the probability of spinning a 2.

Outcome	1	2	3
Spins	161	186	163

$$P(\text{event}) = \frac{\text{number of successful trials}}{\text{number of trials}}$$

$$P(2) \approx \frac{186}{161 + 186 + 163}$$

$$P(2) \approx \frac{186}{510} = \frac{186}{510} \cdot \frac{2}{2} = \frac{372}{1020} \approx \frac{372}{1000} \approx 37.2\%$$

§9-2 Experimental Probability

- Questions to think about:
 - What is the difference between experimental probability and simple probability?
 - How many times do you have to repeat an experiment to be sure the experimental probability is accurate?