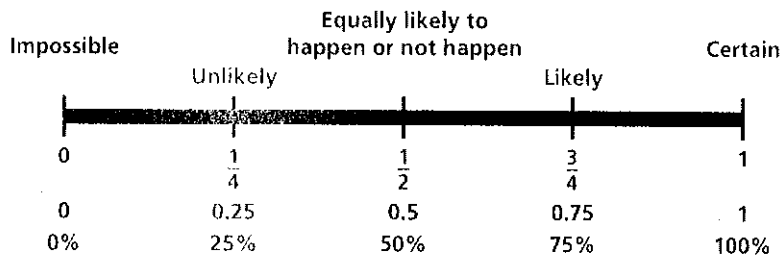


Probability Mini-Lesson #1

Today's Learning Goal: *At the end of today's lesson, you should be able to identify outcomes of an event and find the theoretical and experimental probability of an event.*

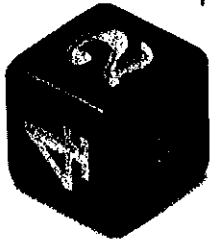
The probability of an event is _____

Probabilities are between _____ and _____. The diagram below relates the likelihood to the probability of an event to occur.



In an experiment, results can vary. These results are called _____. A collection of one or more outcomes is an _____. The outcomes of a specific event are called _____.

Example: *You roll the number cube.*



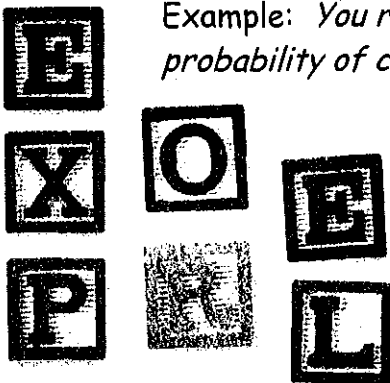
- What are the possible outcomes?
- What are the favorable outcomes of rolling an even number?
- What are the favorable outcomes of rolling a number greater than 5?

Theoretical vs. Experimental Probability:

The theoretical probability of an event is _____

The probability of an event is written as P(event).

Example: *You randomly choose one of the letters shown. What is the theoretical probability of choosing a vowel?*



Example: *The theoretical probability that you randomly choose a green marble from a bag is $\frac{3}{8}$. There are 40 marbles in the bag. How many are green?*

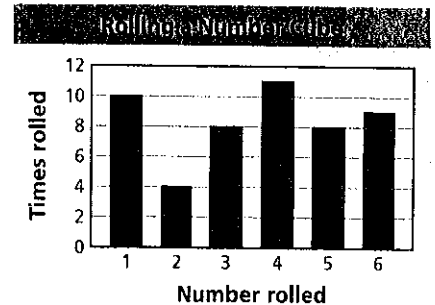
Example: *The theoretical probability that you spin an odd number on a spinner is 0.6. The spinner has 10 sections. How many sections have odd numbers?*

The experimental probability of an event is _____

Example: *Thirteen out of 20 emails in your inbox are junk emails. What is the experimental probability that your next email is junk?*

Example: *At a clothing company, an inspector finds 5 defective pairs in a shipment of 200 jeans. What is the experimental probability of a pair of jeans being defective?*

The bar graph shows the results of rolling a number cube 50 times.



A. What is the experimental probability of rolling an odd number?

B. How does this compare with the theoretical probability of rolling an odd number?

Progress Monitoring: *How do you feel about your level of understanding of solving problems involving probability? (Rate yourself from 0 (don't understand at all) to 10 (doing awesome))*

