

Name: _____ Date: _____

STATISTICS AND PROBABILITY – Understanding Probability

CCSS Math Content 7.SP.C.5: Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability near $\frac{1}{2}$ indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.

SHARPEN YOUR SKILLS:

0.1 $\frac{1}{3}$ $\frac{10}{11}$ 0.05 0.99 0.45 $1\frac{2}{5}$ $\frac{7}{15}$ 3.5 0.53

- Which of the numbers above could represent the probability of an unlikely event? Explain how you determined your answer.

- Which of the numbers above could represent the probability of an event that is neither unlikely nor likely? Explain how you determined your answer.

- Which of the numbers above could represent the probability of a likely event? Explain how you determined your answer.

- Which of the numbers above could not be probabilities? Explain how you determined your answer.

APPLY YOUR SKILLS:

Give 3 examples of probabilities for the type of event. Do not use the numbers from the exercises above.

- Likely event _____

- Unlikely event _____

- Neither likely nor unlikely _____

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STATISTICS AND PROBABILITY – Using Experimental Probability to Understand Theoretical Probability

CCSS Math Content 7.SP.C.6: Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability.

SHARPEN YOUR SKILLS:

A six-sided number cube is rolled.



1. Predict the probability of rolling a 4. Explain how you determined your answer.

2. Roll a six-sided number cube 18 times and record your results for each roll.

3. How many times did you roll a 4 in exercise 2?

4. Based on your answer to exercise 3, would you change your answer to exercise 1? Explain your reasoning.

APPLY YOUR SKILLS:

1. The probability of a fair coin landing on heads when it is flipped is $\frac{1}{2}$. If a coin is flipped 64 times, how many times would you expect it to land on heads? Explain how you determined your answer.

2. The probability of drawing a heart from a standard deck of playing cards is $\frac{1}{4}$. If you randomly draw from a deck of cards 100 times and replace the card each time, how many times would you expect to draw a heart? Explain how you determined your answer.

3. The probability of a certain spinner landing on yellow is $\frac{2}{3}$. If you spin this spinner 45 times, how many times would you expect the spinner to land on yellow? Explain how you determined your answer.
