

Skills Bank

LESSON

1

1. Use a fraction to describe each probability for Keith's rolls of a die.

Keith's Rolls of a Die

First 10 rolls

4 5 2 3 1 2 6 4 2 3

Next 10 rolls

2 1 1 3 1 6 5 4 6 4

Next 10 rolls

1 2 3 6 4 5 1 2 1 3

- probability of an even number in the first 10 rolls
 - probability of an odd number in all 30 rolls
 - probability of a number less than 3 in the first 20 rolls
2. The winners of two different games are shown in the tables.

Game 1

Player A	✓				✓	✓	✓			✓	
Player B		✓	✓	✓				✓	✓		✓

Game 2

Player A			✓		✓		✓				
Player B	✓	✓		✓		✓		✓	✓	✓	✓

- What is Player A's probability of winning each game?
- What is Player B's probability of winning each game?
- Which game seems to be more fair?

2

3. Use percents to describe the probabilities for Bridget's spins.

- spinning a 2
 - spinning a 5
 - spinning a 1
 - spinning an even number
4.
 - Repeat Question 3 using only the first 10 spins.
 - How did the probabilities change?

Bridget's 25 Spins

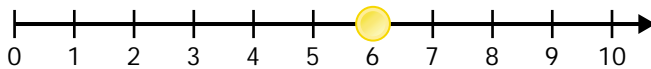
2 3 3 1 4
 1 2 5 1 2
 2 3 1 1 2
 4 5 2 4 1
 1 2 3 3 1

2 5. Roll two dice 20 times. Record the result of each roll. Use percent to describe the probability for each.

- a) two numbers greater than 3
- b) two prime numbers
- c) a sum of 3

Roll	Result
1	4, 2
2	5, 5

3 6. Holden put a counter at 6 on a number line. He flipped a coin to decide how to move. He moved left for heads and right for tails. Conduct an experiment. What is the probability that Holden will end on 7 after three moves?

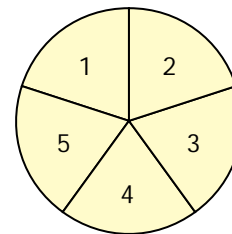


7. Use the same number line as in Question 6. What is the probability that Holden will end on 4 after four moves? Conduct an experiment.

4 8. What is the theoretical probability of each when rolling a die?
 a) a factor of 6 b) a multiple of 2 c) a multiple of 1

9. What is the theoretical probability of each when rolling two dice?
- a) 4 and 3
 - b) 2 and another even number
 - c) two consecutive numbers
 - d) a product of 3
 - e) a product of 6
 - f) numbers 3 apart

5 10. a) Draw a tree diagram to show all possible outcomes when spinning this spinner twice.
 b) Determine the probability of spinning the same number twice. Use the tree diagram.
 c) Determine the probability of spinning two numbers with a difference less than 3. Use the tree diagram.



11. Draw a tree diagram to determine the probabilities that when you pick two cubes from the bag, you pick the red cube before a blue one. Once you pick a cube, you don't return it.



6 12. Predict the number of times you think each event will occur in 72 rolls of two dice.

- a) sum of 6
- b) difference of 2
- c) product of 8