LESSON 11-1 Practice A
Probability

Match each event to its likelihood.

1. rolling a number greater than 6 on a number cube labeled 1 through 6 — D
2. flipping a coin and getting heads — C
3. drawing a red or blue marble from a bag of red marbles and blue marbles — E
4. spinning a number less than 3 on a spinner with 8 equal sections marked 1 through 8 — B
5. rolling a number less than 6 on a number cube labeled 1 through 6 — A

A likely
B unlikely
C as likely as not
D impossible
E certain

Solve.

6. A bag contains 4 red marbles, 3 green marbles, and 2 yellow marbles. The probability of randomly picking a yellow marble is $\frac{2}{9}$. What is the probability of not picking a yellow marble? $\frac{7}{9}$
7. A number cube is labeled 1 through 6. The probability of randomly rolling a 4 is $\frac{1}{6}$. What is the probability of not rolling a 4? $\frac{5}{6}$

Tell whether the event is impossible, unlikely, as likely as not, likely, or certain.

8. Janelle almost never eats meat. On Monday, the school cafeteria offers three main choices. The choices are hamburger, tuna, or a turkey sandwich. Estimate the probability that Janelle will choose a hamburger. unlikely
9. Tyrone rides his bicycle to school if he gets up by 7:15 A.M. Tyrone gets up by 7:15 A.M. about half the time. Estimate the probability that Tyrone will ride his bicycle to school. as likely as not

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LESSON 11-1 Practice B
Probability

Determine whether each event is impossible, unlikely, as likely as not, likely, or certain.

1. rolling an even number on a number cube labeled 1 through 6 — as likely as not
2. picking a card with a vowel on it from a box of cards in which each letter of the alphabet is written on a card — unlikely
3. spinning a number greater than 2 on a spinner with 10 equal sections marked 1 through 10 — likely
4. drawing a red marble from a bag of black, blue, and green marbles — impossible
5. flipping a coin and getting heads or tails — certain
6. rolling a number that is less than three 5 times in a row on number on a number cube labeled 1 through 6 — unlikely

Solve.

7. A bag contains 3 green marbles, 7 blue marbles, and 2 black marbles. The probability of randomly picking a green marble is $\frac{1}{4}$. What is the probability of not picking a green marble? $\frac{3}{4}$
8. A spinner has 8 equal sections labeled 1 through 8. The probability of spinning a number that is greater than or equal to 6 is $\frac{3}{8}$. What is the probability of spinning a number that is not greater than or equal to 6? $\frac{5}{8}$
9. The probability of randomly drawing a red card from a bag that contains red, blue, and green cards is $\frac{3}{10}$. What is the probability of not drawing a red card? $\frac{7}{10}$
10. Myra almost always spends at least 45 minutes on the treadmill. If Myra got on the treadmill at 5:20 P.M., estimate the probability that she will still be on the treadmill at 6:00. likely
11. Morris rarely arrives home before 4:00 P.M. It is now 3:20 P.M. Estimate the probability that Morris will arrive home in the next 30 minutes. unlikely

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LESSON 11-1 Practice C
Probability

Determine whether each event is impossible, unlikely, as likely as not, likely, or certain.

1. rolling a number less than 4 on a number cube labeled 1 through 6 — as likely as not
2. picking a card with a multiple of 3 from a box with 10 number cards numbered 1 through 10 — unlikely
3. drawing a red marble from a bag of 3 blue marbles, 8 red marbles, and 2 green marbles — likely
4. rolling a number cube that has sides labeled 2, 4, 6, 8, 10, and 12, and getting an even number — certain
5. picking two cards that have a sum of greater than 10 from a set of number cards in which there are three 4's, five 3's, and two 5's — impossible
6. drawing a yellow marble from a bag of 5 blue marbles, 2 green marbles, and 7 yellow marbles — as likely as not

Solve.

7. A spinner has 16 sections labeled 1 through 16. The probability of spinning a number that is less than or equal to 10 is $\frac{5}{8}$. What is the probability of spinning a number that is not less than or equal to 10? $\frac{3}{8}$
8. The probability of randomly picking a striped marble from a bag that contains red, blue, and striped marbles marbles is $\frac{5}{12}$. What is the probability of not picking a striped marble? $\frac{7}{12}$
9. When Sam studies for 1 hour or more, he almost always gets at least a B on his math test. Sam studies from 8:45 to 10:00. Estimate the probability that Sam will get a B on his quiz. likely
10. A bag contains 12 black cards and 11 red cards. Julia randomly draws 2 black cards and does not replace them. Will Julia be more likely to draw a black card than a red card on her next draw? Explain.

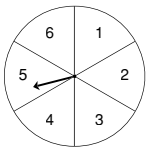
No. Since the bag will now contain 10 black cards and 11 red cards, Julia will be more likely to pick a red card.

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LESSON 11-1 Reteach
Probability

You can describe the probability of an event as **impossible, unlikely, as likely as not, likely,** or **certain.**

For the spinner at the right:



- Spinning a 7 is **impossible** because the spinner has no 7.
- Spinning a 5 is **unlikely** because only 1 of the 6 numbers is a 5.
- Spinning an even number is **as likely as not** because 3 of the numbers are even and 3 of the numbers are odd.
- Spinning a number that is greater than 1 is **likely** because 5 of the 6 numbers are greater than 1.
- Spinning a number that is less than 7 is **certain** because all of the numbers are less than 7.

Use the spinner. Write impossible, unlikely, as likely as not, likely, or certain to complete each statement.

1. Four of the 6 numbers are less than 5. Spinning a number that is less than 5 is likely.
2. Six of the 6 numbers are greater than 0. Spinning a number that is greater than 0 is certain.
3. One of the 6 numbers is a 3. Spinning a 3 is unlikely.

A bag contains 1 red marble, 2 blue marbles, and 3 green marbles.

The probability of picking a red marble is $\frac{1}{6}$.
To find the probability of not picking a red marble, subtract the probability of picking a red marble from 1. $P = 1 - \frac{1}{6} = \frac{5}{6}$

Solve.

4. A number cube is labeled 1 through 6. The probability of randomly rolling a 3 is $\frac{1}{6}$. What is the probability of not rolling a 3? $P = 1 - \frac{1}{6} = \frac{5}{6}$
5. A spinner has 5 sections labeled 1 through 5. The probability of randomly spinning an even number is $\frac{2}{5}$. What is the probability of not spinning an even number? $P = 1 - \frac{2}{5} = \frac{3}{5}$

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