

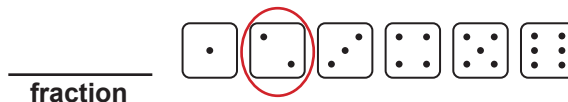
Basic Probability

1 Write the probability of flipping “heads” as a fraction, a decimal, and a percentage.



_____ _____ _____
fraction decimal percentage

2 What is the probability for rolling a 2 on a standard 6-sided die? (write as a fraction)



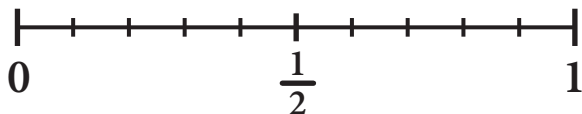
fraction

Would this event be considered “likely” or “unlikely”? _____

3 A spinner has 10 equally sized sectors. What is the probability of spinning a 5? (write 3 ways)

_____ _____ _____
fraction decimal percentage

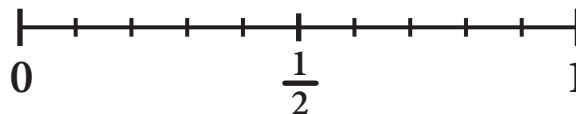
Place a dot on the probability line to represent that probability.



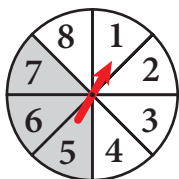
4 A bag contains 3 red marbles and one blue marble. What is the probability of randomly choosing a red marble? (write 3 ways)

_____ _____ _____
fraction decimal percentage

Place a dot on the probability line to represent that probability.

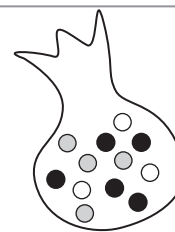


5 Use this spinner to answer the following questions: (Use fraction form to express the probabilities.)



- a. What is the probability of spinning an 8? _____
- b. What is the probability of spinning an 4? _____
- c. What is the probability of spinning a grey sector? _____
- d. What is the probability of spinning a white sector? _____

6 Use this bag of 12 marbles to answer these questions. (Use fraction form to express the probabilities.)



If you randomly select a marble...

- a. What is the probability it will be black? _____
- b. What is the probability it will be grey? _____
- c. What is the probability it will be white? _____
- d. What is the probability it will be white or grey? _____

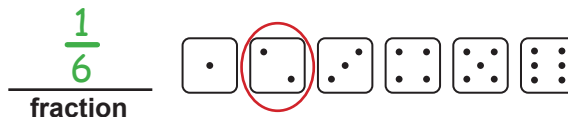
Basic Probability

- 1** Write the probability of flipping “heads” as a fraction, a decimal, and a percentage.



$\frac{1}{2}$ 0.5 50%
 fraction decimal percentage

- 2** What is the probability for rolling a 2 on a standard 6-sided die? (write as a fraction)

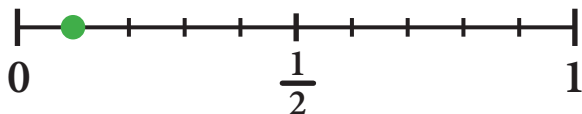


Would this event be considered “likely” or “unlikely”?
unlikely

- 3** A spinner has 10 equally sized sectors. What is the probability of spinning a 5? (write 3 ways)

$\frac{1}{10}$ 0.1 10%
 fraction decimal percentage

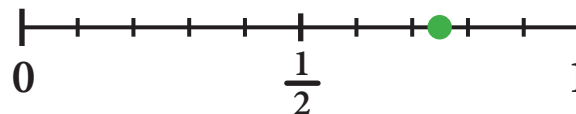
Place a dot on the probability line to represent that probability.



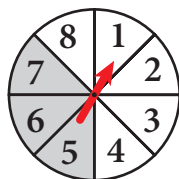
- 4** A bag contains 3 red marbles and one blue marble. What is the probability of randomly choosing a red marble? (write 3 ways)

$\frac{3}{4}$ 0.75 75%
 fraction decimal percentage

Place a dot on the probability line to represent that probability.

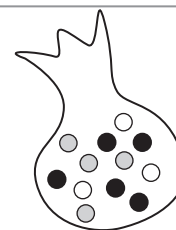


- 5** Use this spinner to answer the following questions: (Use fraction form to express the probabilities.)



- a.** What is the probability of spinning an 8? $\frac{1}{8}$
- b.** What is the probability of spinning an 4? $\frac{1}{8}$
- c.** What is the probability of spinning a grey sector? $\frac{3}{8}$
- d.** What is the probability of spinning a white sector? $\frac{5}{8}$

- 6** Use this bag of 12 marbles to answer these questions. (Use fraction form to express the probabilities.)



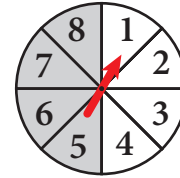
If you randomly select a marble...

- a.** What is the probability it will be black? $\frac{5}{12}$
- b.** What is the probability it will be grey? $\frac{4}{12}$ or $\frac{1}{3}$
- c.** What is the probability it will be white? $\frac{3}{12}$ or $\frac{1}{4}$
- d.** What is the probability it will be white or grey? $\frac{7}{12}$

Basic Probability as Fractions

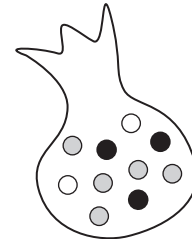
A-BP 1

Instructions: Use this spinner to answer the following questions:
(Use fraction form to express the probabilities and simplify if possible.)



- | | | | |
|--|---------------------------------|--|---|
| <p>1 What is the probability of spinning a 1? <u> </u></p> | <p>$\frac{1}{8}$</p> | <p>2 What is the probability of spinning a 1 <u>or</u> a 2? <u> </u></p> | <p>$\frac{2}{8}$ or $\frac{1}{4}$</p> |
| <p>3 What is the probability of spinning a 6? <u> </u></p> | | <p>4 What is the probability of spinning a white sector? <u> </u></p> | |
| <p>5 What is the probability of spinning a 10? <u> </u></p> | | <p>6 What is the probability of spinning an even number? <u> </u></p> | |
| <p>7 What is the probability of spinning a grey sector? <u> </u></p> | | <p>8 What is the probability of spinning a number greater than 5? <u> </u></p> | |

Instructions: Use this bag of 10 marbles to answer the following questions: (Use fraction form to express the probabilities and simplify if possible.)



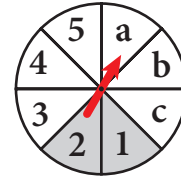
If you randomly select a marble...

- | | |
|---|--|
| <p>9 What is the probability that it will be black? <u> </u></p> | <p>10 What is the probability that it will be grey? <u> </u></p> |
| <p>11 What is the probability that it will be white? <u> </u></p> | <p>12 What is the probability that it will be green? <u> </u></p> |
| <p>13 What is the probability that it will be black <u>or</u> white? <u> </u></p> | <p>14 What is the probability that it will be black <u>or</u> grey? <u> </u></p> |
| <p>15 What is the probability that it will be white <u>or</u> grey? <u> </u></p> | <p>16 What is the probability that it will <u>not</u> be green? <u> </u></p> |

Basic Probability as Fractions, Decimals and Percents

A-BP 2

Instructions: Use this spinner to answer the following questions:
(You can use a calculator to get the decimal values if you need to.)



1 What is the probability of spinning a number?

$\frac{5}{8}$	0.625	62.5%
fraction	decimal	percentage

2 What is the probability of spinning a letter?

_____	_____	_____
fraction	decimal	percentage

3 What is the probability of spinning a 'b'?

_____	_____	_____
fraction	decimal	percentage

4 What is the probability of spinning a grey sector?

_____	_____	_____
fraction	decimal	percentage

5 What is the probability of spinning a white sector?

_____	_____	_____
fraction	decimal	percentage

6 What is the probability of spinning a number less than 5?

_____	_____	_____
fraction	decimal	percentage

7 What is the probability of spinning a number or a letter?

_____	_____	_____
fraction	decimal	percentage

8 What is the probability of spinning a 6?

_____	_____	_____
fraction	decimal	percentage

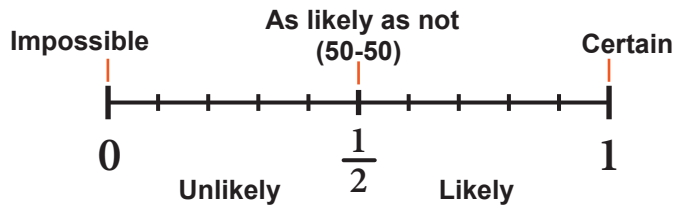
9 What is the probability of spinning a white sector or a 2?

_____	_____	_____
fraction	decimal	percentage

Likely or Unlikely? Etc.

A-BP 3

Instructions: For each question below, tell if the event described would be “impossible”, “unlikely”, “as likely as not” (you can write “50-50”), “likely” or “certain”.



- 1** What is the probability of flipping “heads” in a fair coin toss?

as likely as not (or 50-50)

- 2** If the weather report says there is a 100% chance of rain in the afternoon, it means that rain is...

- 3** A bag of marbles contains 10 red, 5 green and 7 blue marbles. How would you describe the probability of randomly choosing a yellow marble from the bag?

- 4** On a multiple choice question, if there are 5 possible answers, getting the right answer by a completely random guess would be...

- 5** If a music playlist contains 8 songs you like and 2 you don’t, randomly playing a song that you like is...

- 6** Rolling a 6 on a standard 6-sided die is considered...

- 7** Rolling an even number on a standard 6-sided die would be...

- 8** If the weather report says there is a 20% chance of snow, that would be considered...

- 9** If a bag of marbles contains 10 blue, 4 yellow and 4 red marbles, randomly choosing a blue marble would be...

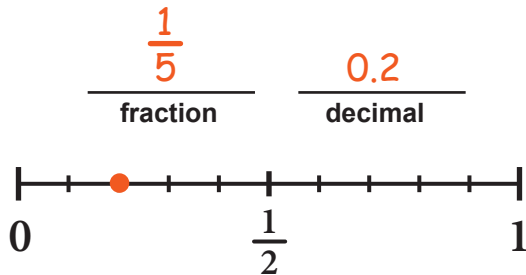
- 10** If an assorted box of chocolates contains 20 different kinds, and you like all of them, what is the probability that you will randomly select one that you like?

The Probability Line

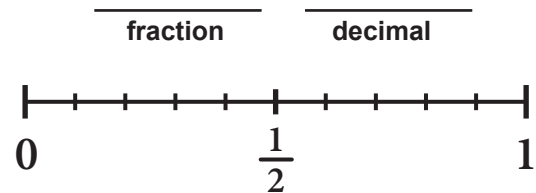
A-BP 4

Instructions: Answer the following probability questions using both fraction and decimal form. (You can use a calculator to get the decimal form if you need to.) Then plot the probabilities on the Probability Line.

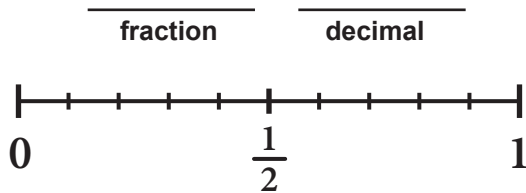
- 1** A spinner has 5 equally sized sectors numbered 1 thru 5. What is the probability of spinning a 2?



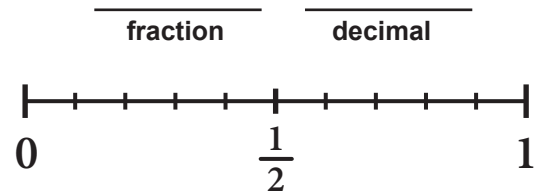
- 2** What is the probability of rolling an even number on a standard 6-sided die?



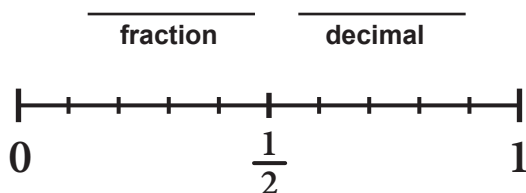
- 3** A bag contains 20 marbles. 5 are blue and the rest are red. What is the probability of randomly choosing a red marble?



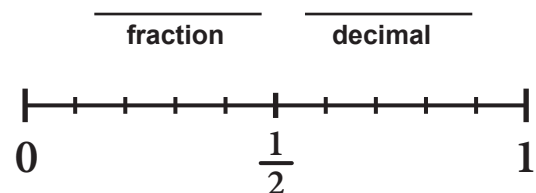
- 4** A spinner has 10 equally sized sectors numbered 1 thru 10. What is the probability of spinning a number that's greater than 1?



- 5** A box of popsicles contains 3 cherry, 3 grape and 4 orange. What is the probability of randomly choosing orange?



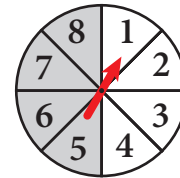
- 6** A box of 12 chocolates has 3 pieces that contain nuts. If you choose at random, what is the probability of getting a piece with nuts?



Basic Probability as Fractions

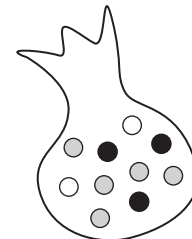
A-BP 1

Instructions: Use this spinner to answer the following questions:
(Use fraction form to express the probabilities and simplify if possible.)



- | | | | |
|--|---------------------------------------|--|---------------------------------------|
| <p>1 What is the probability of spinning a 1?</p> | $\frac{1}{8}$ | <p>2 What is the probability of spinning a 1 <u>or</u> a 2?</p> | $\frac{2}{8} \text{ or } \frac{1}{4}$ |
| <p>3 What is the probability of spinning a 6?</p> | $\frac{1}{8}$ | <p>4 What is the probability of spinning a white sector?</p> | $\frac{4}{8} \text{ or } \frac{1}{2}$ |
| <p>5 What is the probability of spinning a 10?</p> | $\frac{0}{8} \text{ or } 0$ | <p>6 What is the probability of spinning an even number?</p> | $\frac{4}{8} \text{ or } \frac{1}{2}$ |
| <p>7 What is the probability of spinning a grey sector?</p> | $\frac{4}{8} \text{ or } \frac{1}{2}$ | <p>8 What is the probability of spinning a number greater than 5?</p> | $\frac{3}{8}$ |

Instructions: Use this bag of 10 marbles to answer the following questions: (Use fraction form to express the probabilities and simplify if possible.)



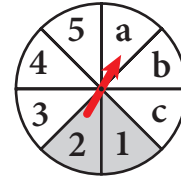
If you randomly select a marble...

- | | | | |
|---|--|--|--|
| <p>9 What is the probability that it will be black?</p> | $\frac{3}{10}$ | <p>10 What is the probability that it will be grey?</p> | $\frac{5}{10} \text{ or } \frac{1}{2}$ |
| <p>11 What is the probability that it will be white?</p> | $\frac{2}{10} \text{ or } \frac{1}{5}$ | <p>12 What is the probability that it will be green?</p> | $\frac{0}{10} \text{ or } 0$ |
| <p>13 What is the probability that it will be black <u>or</u> white?</p> | $\frac{5}{10} \text{ or } \frac{1}{2}$ | <p>14 What is the probability that it will be black <u>or</u> grey?</p> | $\frac{8}{10} \text{ or } \frac{4}{5}$ |
| <p>15 What is the probability that it will be white <u>or</u> grey?</p> | $\frac{7}{10}$ | <p>16 What is the probability that it will <u>not</u> be green?</p> | $\frac{10}{10} \text{ or } 1$ |

Basic Probability as Fractions, Decimals and Percents

A-BP 2

Instructions: Use this spinner to answer the following questions:
(You can use a calculator to get the decimal values if you need to.)



1 What is the probability of spinning a number?

$\frac{5}{8}$	0.625	62.5%
fraction	decimal	percentage

2 What is the probability of spinning a letter?

$\frac{3}{8}$	0.375	37.5%
fraction	decimal	percentage

3 What is the probability of spinning a 'b'?

$\frac{1}{8}$	0.125	12.5%
fraction	decimal	percentage

4 What is the probability of spinning a grey sector?

$\frac{2}{8}$ or $\frac{1}{4}$	0.25	25%
fraction	decimal	percentage

5 What is the probability of spinning a white sector?

$\frac{6}{8}$ or $\frac{3}{4}$	0.75	75%
fraction	decimal	percentage

6 What is the probability of spinning a number less than 5?

$\frac{4}{8}$ or $\frac{1}{2}$	0.5	50%
fraction	decimal	percentage

7 What is the probability of spinning a number or a letter?

$\frac{8}{8}$ or 1	1.0	100%
fraction	decimal	percentage

8 What is the probability of spinning a 6?

$\frac{0}{8}$	0.0	0%
fraction	decimal	percentage

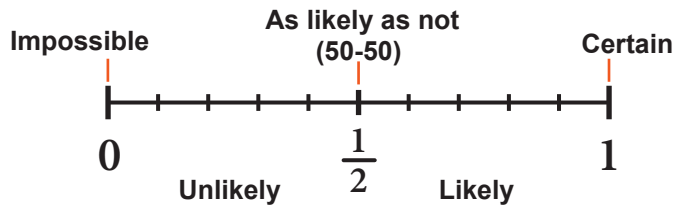
9 What is the probability of spinning a white sector or a 2?

$\frac{7}{8}$	0.875	87.5%
fraction	decimal	percentage

Likely or Unlikely? Etc.

A-BP 3

Instructions: For each question below, tell if the event described would be “impossible”, “unlikely”, “as likely as not” (you can write “50-50”), “likely” or “certain”.



- 1 What is the probability of flipping “heads” in a fair coin toss?

as likely as not (or 50-50)

- 2 If the weather report says there is a 100% chance of rain in the afternoon, it means that rain is...

certain

- 3 A bag of marbles contains 10 red, 5 green and 7 blue marbles. How would you describe the probability of randomly choosing a yellow marble from the bag?

impossible

- 4 On a multiple choice question, if there are 5 possible answers, getting the right answer by a completely random guess would be...

unlikely

- 5 If a music playlist contains 8 songs you like and 2 you don’t, randomly playing a song that you like is...

likely

- 6 Rolling a 6 on a standard 6-sided die is considered...

unlikely

- 7 Rolling an even number on a standard 6-sided die would be...

as likely as not (or 50-50)

- 8 If the weather report says there is a 20% chance of snow, that would be considered...

unlikely

- 9 If a bag of marbles contains 10 blue, 4 yellow and 4 red marbles, randomly choosing a blue marble would be...

likely

- 10 If an assorted box of chocolates contains 20 different kinds, and you like all of them, what is the probability that you will randomly select one that you like?

certain

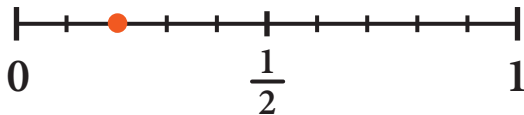
The Probability Line

A-BP 4

Instructions: Answer the following probability questions using both fraction and decimal form. (You can use a calculator to get the decimal form if you need to.) Then plot the probabilities on the Probability Line.

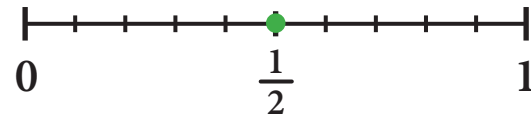
- 1** A spinner has 5 equally sized sectors numbered 1 thru 5. What is the probability of spinning a 2?

$$\frac{1}{5} \quad \frac{0.2}{\text{fraction} \quad \text{decimal}}$$



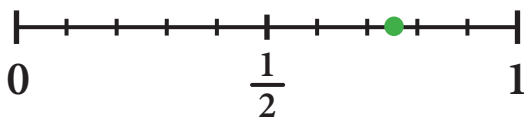
- 2** What is the probability of rolling an even number on a standard 6-sided die?

$$\frac{3}{6} \text{ or } \frac{1}{2} \quad \frac{0.5}{\text{fraction} \quad \text{decimal}}$$



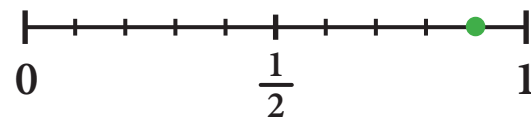
- 3** A bag contains 20 marbles. 5 are blue and the rest are red. What is the probability of randomly choosing a red marble?

$$\frac{15}{20} \text{ or } \frac{3}{4} \quad \frac{0.75}{\text{fraction} \quad \text{decimal}}$$



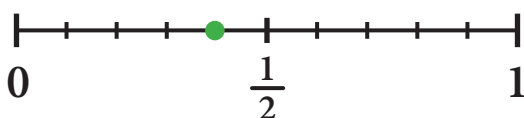
- 4** A spinner has 10 equally sized sectors numbered 1 thru 10. What is the probability of spinning a number that's greater than 1?

$$\frac{9}{10} \quad \frac{0.9}{\text{fraction} \quad \text{decimal}}$$



- 5** A box of popsicles contains 3 cherry, 3 grape and 4 orange. What is the probability of randomly choosing orange?

$$\frac{4}{10} \quad \frac{0.4}{\text{fraction} \quad \text{decimal}}$$



- 6** A box of 12 chocolates has 3 pieces that contain nuts. If you choose at random, what is the probability of getting a piece with nuts?

$$\frac{3}{12} \text{ or } \frac{1}{4} \quad \frac{0.25}{\text{fraction} \quad \text{decimal}}$$

