

7th Grade  
May 25, 2021

Today we will:

- Review HW
- Work on task cards

HOMEWORK:

None

Candy survey for Wednesday's packet:  
Which one do you like best of these 3?

7L:

Milky Way Bar: 1  
Sour Patch Kids: 5  
Tootsie Roll Pop: 0

7R:

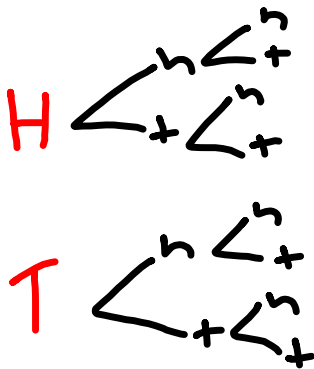
Milky Way Bar: 1  
Sour Patch Kids: 3  
Tootsie Roll Pop: 3

**LESSON 8 SKILLS PRACTICE**

**Probability of Compound Events**

Draw a tree diagram to find the number of outcomes for each situation.

1. Three coins are tossed.



⑧  
FCP  
 $2 \times 2 \times 2 = 8$

2. A number cube is rolled and a coin is tossed.



FCP  
 $6 \times 2 = 12$

Find the total number of outcomes in each situation.

3. One card is drawn from a standard deck of cards.

52

5. One coin is flipped three consecutive times.

$2 \times 2 \times 2 = 8$

7. A sweater comes in 3 sizes and 6 colors.

$3 \times 6 = 18$

4. Three six-sided number cubes are rolled.

$6 \times 6 \times 6 = 216$

6. One coin is flipped and one eight-sided die is rolled.

$2 \times 8 = 16$

8. A restaurant offers dinners with a choice each of two salads, six entrees, and five desserts.

$2 \times 6 \times 5 = 60$

Find each probability.

9. Draw the ace of spades from a standard deck of cards.

$\frac{1}{52}$

11. Draw the six of clubs from a standard deck of cards.

$\frac{1}{52}$

13. Roll a 7 or an 8 on an eight-sided die.

$\frac{2}{8} = \frac{1}{4} = 25\%$

15. Draw a club from a standard deck of cards.

$\frac{13}{52} = \frac{1}{4}$

17. A coin is tossed and an eight-sided die is rolled. What is the probability that the coin lands on tails, and the die lands on a 2?

$\frac{1}{2} \times \frac{1}{8}$

10. A coin is tossed twice. What is the probability of getting two tails?

$\frac{1}{2} \times \frac{1}{2} = \frac{1}{4} = 25\%$

12. Roll a 4 or higher on a six-sided number cube.

$\frac{3}{6} = \frac{1}{2} = 50\%$

14. Roll an even number on an eight-sided die.

$\frac{4}{8} = \frac{1}{2}$

16. Roll an odd number on a six-sided number cube.

$\frac{3}{6} = \frac{1}{2}$

18. A coin is tossed and a card is drawn from a standard deck of cards. What is the probability of landing on tails and choosing a red card?

$\frac{1}{2} \times \frac{1}{2} = \frac{1}{4} = 25\%$

## Independent vs Dependent Events:

In **probability**, two **events** are **independent** if the incidence of one **event** does not affect the **probability** of the other **event**. If the incidence of one **event** does affect the **probability** of the other **event**, then the **events** are dependent.

$P(\text{King})$  if I don't replace the card?  
and I got a King the first time

$$\frac{4}{52} \times \frac{3}{51} = \frac{12}{2652} = 0.0045 = 0.45\%$$

Marbles in a bag.

3 blue, 4 green

I choose a marble and get blue. I don't put it back.

What is  $P(\text{blue, green})$ ?

$$\frac{3}{7} \times \frac{4}{6} = \frac{12}{42} = \frac{4}{21}$$


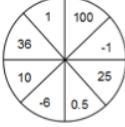
$$= 29\%$$



(Key)

<p style="text-align: center;">1</p> <p>What is the probability that a coin will land on heads and then a coin will land on tails?</p> $\frac{1}{2} \times \frac{1}{2} = \left(\frac{1}{4}\right)$	<p style="text-align: center;">2</p> <p>You have a bag of 17 marbles. Four are blue, 6 are green, 2 are red, and the others are yellow. What is the probability of drawing a red marble, putting it aside, and then drawing a green marble?</p> $\frac{2}{17} \times \frac{6}{16} = \frac{6}{136} = \left(\frac{3}{68}\right)$
<p style="text-align: center;">3</p> <p>You have a bag of 17 marbles. Four are blue, 6 are green, 2 are red, and the others are yellow. What is the probability of drawing a green marble, putting it aside, and then drawing another green marble?</p> $\frac{6}{17} \times \frac{5}{16} = \frac{30}{272} = \left(\frac{15}{136}\right)$	<p style="text-align: center;">4</p> <p>You have tiles numbered 1 – 9 in a bag. What is the probability of drawing the number 2, putting it aside, and then drawing the number 5?</p> $\frac{1}{9} \times \frac{1}{8} = \frac{1}{72}$

<p style="text-align: center;">5</p> <p>You have a bag of 17 marbles. Four are blue, 6 are green, 2 are red, and the others are yellow. What is the probability of drawing a blue marble, replacing it, and then drawing a yellow marble?</p> $\frac{4}{17} \times \frac{5}{17} = \left(\frac{20}{289}\right)$	<p style="text-align: center;">6</p> <p>What is the probability of drawing the ACE of diamonds from a deck of cards, putting it back in deck, shuffling the deck, and then drawing the ACE of clubs?</p> $\frac{1}{52} \times \frac{1}{52} = \left(\frac{1}{2704}\right)$
<p style="text-align: center;">7</p> <p>What is the probability of rolling a 3 on a 6-sided number cube and then NOT rolling a 3 on a 6-sided number cube?</p> $\frac{1}{6} \times \frac{5}{6} = \left(\frac{5}{36}\right)$	<p style="text-align: center;">8</p> <p>What is the probability of drawing a Jack from a deck of cards, putting it aside, and then drawing another Jack?</p> $\frac{4}{52} \times \frac{3}{51} = \frac{12}{2652} = \frac{1}{221}$

<p style="text-align: center;">11</p> <p>A spinner is divided into 8 equal sections as shown.</p>  <p>What is the probability that the spinner will land on a section that is NOT an even number and then land on a section that is an even number?</p>	<p style="text-align: center;">12</p> <p>A spinner is divided into 8 equal sections as shown.</p>  <p>What is the probability that the spinner will land on a section that is three digit number and then land on a section that is negative?</p>
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$$\frac{1}{2} \times \frac{1}{2} = \left(\frac{1}{4}\right)$$

$$\frac{1}{8} \times \frac{1}{4} = \left(\frac{1}{32}\right)$$

