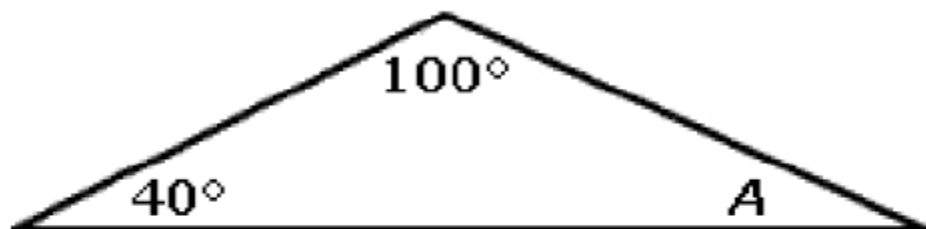


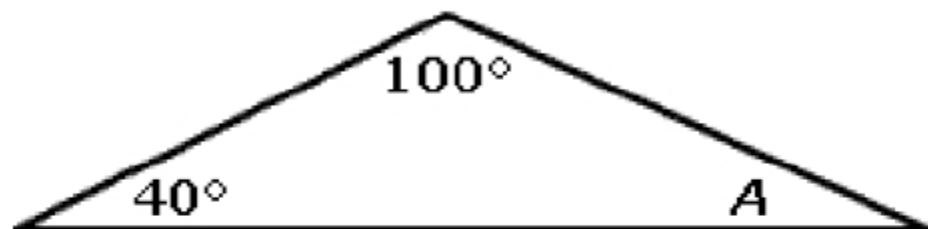
What is the measure of $\angle A$?



- A) 30°
- B) 40°
- C) 50°
- D) 100°



What is the measure of $\angle A$?



- A) 30°
- ✓ B) 40°
- C) 50°
- D) 100°



Lesson 11.1 Compound Events Day 2

Objective

TSW understand concept of probability

*understand compound events


*represent compound events using possibility diagram

Common Core State Standards

Extend 7 SP 8b- Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams.

Extend 7 SP 8a- Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.

Mathematical Practices *MP3 Construct arguments MP 4 Model Mathematics MP8 Express regularity in reasoning*



▶ The probability of simple events can be used to compute the probability of compound events, either dependent or independent.

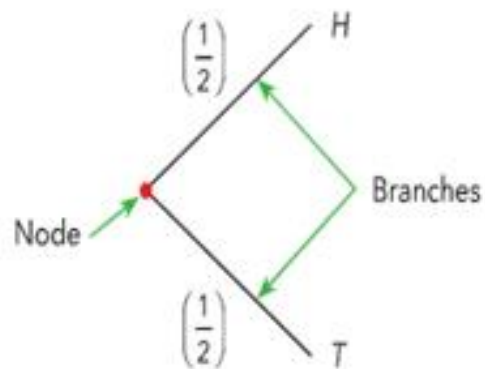
Lesson 11.1 Compound Events Day 1

11.1 Compound Events Day 2

TSW

- Understand Compound events
- Represent Compound events

Vocabulary- Tree Diagram



For drawing any tree diagram, you should take note of the following:

- Each branch starts from the same node.
- The number of branches indicates the number of outcomes the event has.
- The outcome for the event is written at the end of a branch.
- The probability of the outcome of an event is written in parentheses along the branch.
- The probabilities of the branches from each node must add up to 1.

Example 3**Represent a compound event using a tree diagram.**

- a) Robyn has a fair spinner and a coin as shown. She first spins the spinner once and then tosses the coin. Draw a tree diagram to represent all possible outcomes. Then tell the number of possible outcomes.

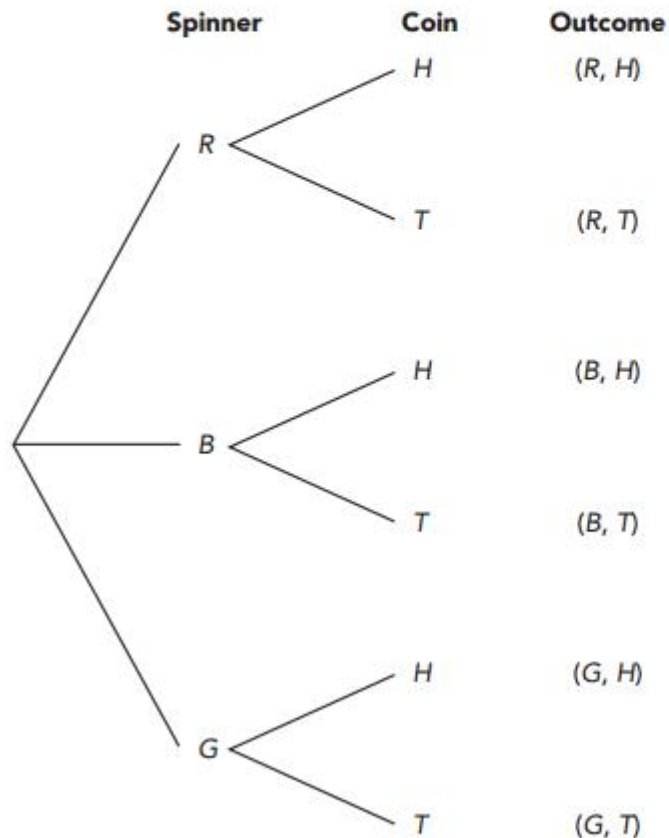


Example 3 Represent a compound event using a tree diagram.

- a) Robyn has a fair spinner and a coin as shown. She first spins the spinner once and then tosses the coin. Draw a tree diagram to represent all possible outcomes. Then tell the number of possible outcomes.

Solution

First, draw branches for each outcome of the first event, the spinner. The end of each branch becomes a node for the second event, tossing a coin.



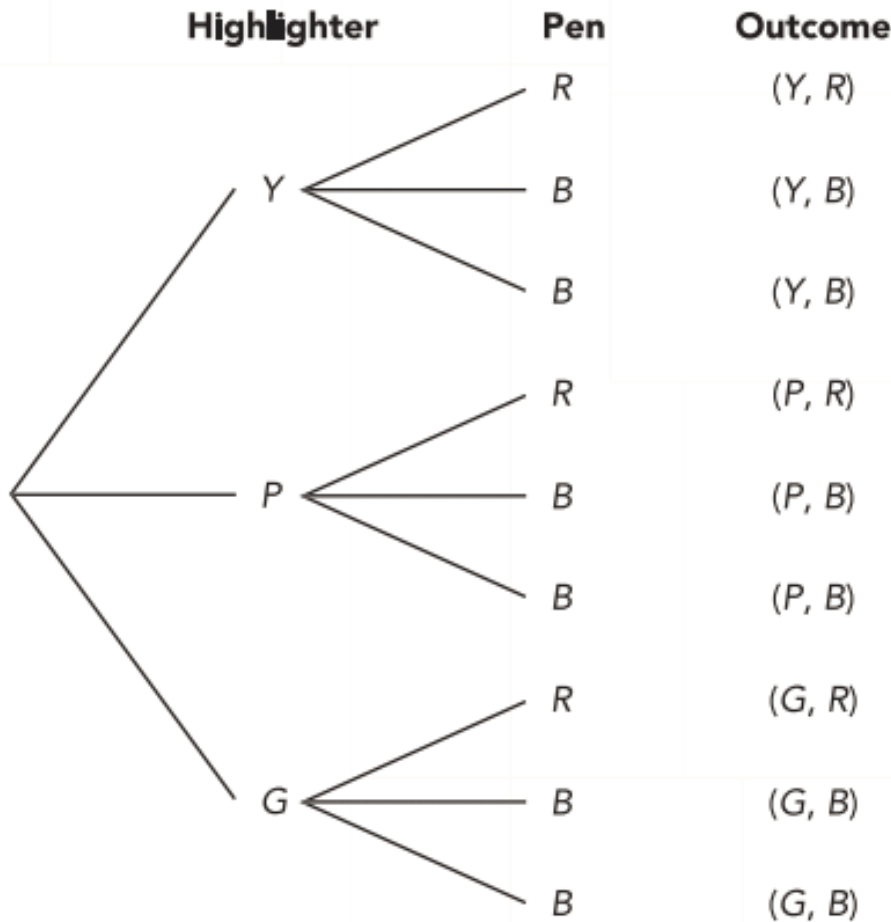
R represents red
B represents blue
G represents green
H represents heads
T represents tails

There are 6 possible outcomes in this compound event.

b) Eric has a yellow, a pink, and a green highlighter in his pencil case. He also has 1 red pen and 2 black pens. Eric randomly selects a highlighter and a pen. Draw a tree diagram to represent all possible outcomes. Then tell the number of

- b) Eric has a yellow, a pink, and a green highlighter in his pencil case. He also has 1 red pen and 2 black pens. Eric randomly selects a highlighter and a pen. Draw a tree diagram to represent all possible outcomes. Then tell the number of

Solution



Y represents yellow
P represents pink
G represents green
R represents red
B represents black

There are 9 possible outcomes in this compound event.

Lesson 11.1 Compound Events Day 2

Guided Practice

For each compound event, draw a tree diagram to represent the possible outcomes. Then tell the number of possible outcomes.

- 8 Joshua has two bags. The first bag contains 2 blue beads and 1 green bead. The second bag contains 3 lettered cards with the letters P, Q, and R. Joshua randomly takes an item from the first bag, and then from the second bag.
- 9 A fair coin is tossed, and then a fair four-sided color die with faces painted yellow, green, blue, and black is rolled. The color facing down is the result recorded.

Lesson 11.1 Compound Events Day 2

- 8 Joshua has two bags. The first bag contains 2 blue beads and 1 green bead. The second bag contains 3 lettered cards with the letters P, Q, and R. Joshua randomly takes an item from the first bag, and then from the second bag. **9 outcomes**
- 9 A fair coin is tossed, and then a fair four-sided color die with faces painted yellow, green, blue, and black is rolled. The color facing down is the result recorded. **8 outcomes**

Lesson 11.1 Compound Events Day 1

Practice 11.1 #1-14

Practice 11.1

Tell whether each statement is **True** or **False**.

- 1 Selecting the letter A from the word PROBABILITY is a compound event.
- 2 Selecting the letter B from the word BASEBALL and then from the word ABLE is a simple event.
- 3 Tossing a fair six-sided number die to get either an even number or a five is a compound event.
- 4 Umberto has 3 red cards and 4 blue cards. Drawing two red cards in a row, without replacing the first card before drawing the second card, is a compound event.

Tell whether each event is a simple or compound event. If it is a compound event, identify the simple events that form the compound event.


- 5 Getting a 6 when a fair six-sided number die is rolled.
- 6 Rolling three fair six-sided number dice and obtaining a sum of 18 from the throws.
- 7 Getting an eighteen when a fair twenty-sided number die is rolled.



Challenge-

- *Solve created equations
“Challenge your brain”
- *BuzzMath
- *MangaHigh



 **Lesson Check #9 & 11-** can use a possibility diagram to represent and find the number of possible outcomes for a compound event

Ticket Out the Door- Connect, Extend, Challenge

1. How are the ideas and information presented **CONNECTED** to what you already knew?
2. What new ideas did you get that **EXTENDED** or pushed your thinking in new directions?
3. What is still **CHALLENGING** or confusing for you to get your mind around? What questions, wonderings or puzzles do you now have?