

Outcome Match-Up

Build sample spaces and find event outcomes.

GRADE 7 • NY-7.SP.8.b

NY-7.SP.8.b "Represent sample spaces for compound events using methods such as organized lists, sample space tables, and tree diagrams. For an event described in everyday language, identify the outcomes in the sample space which compose the event."

NAME _____

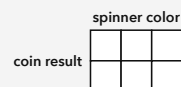
DATE _____

BUILD EVERY PAIR

For two actions, pair each result from the first action with every result from the second action. The full set of pairs is the sample space. Use the event words to select only the pairs that fit.

WORKED EXAMPLE

Flip a coin, then spin a spinner with Red, Blue, and Green. List the outcomes for heads and a color that is not Green.



1. List every pair: (H, Red), (H, Blue), (H, Green), (T, Red), (T, Blue), (T, Green).
2. The event needs heads and a color other than Green.
3. Keep the two matching pairs.

Answer: (H, Red), (H, Blue)

PRACTICE 4 problems

- 1** Flip a coin and roll a 4-sided number cube labeled 1, 2, 3, 4. Make an organized list for the sample space. Then list the outcomes for heads and an even number.

ANSWER _____

- 2** Choose one letter from L, M, N and one digit from 5, 6. Use a tree diagram or list. List the outcomes for choosing M or 6.

ANSWER _____

- 3** Flip a coin and roll a 5-sided number cube labeled 0, 1, 2, 3, 4. Write the complete sample space.

ANSWER _____

- 4** Spin a color spinner with Red and Blue, then spin a number spinner with 6, 8, 10. List the outcomes for Red and a number greater than 6.

ANSWER _____

APPLY IT Show your work

- 1** For a study playlist, Jalen chooses Pop, Hip-Hop, or Electronic. Then he chooses a length of 20 or 40 minutes. List the outcomes for Electronic or 40 minutes.

WORK SPACE

ANSWER _____

- 2** For a school club hoodie, Ana chooses Black, Teal, or Gold and then chooses a Lightning or Wave design. List the full sample space and the outcomes for Teal or Wave.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A student makes a badge by choosing Red or Blue, Star or Moon, and a number from 1, 2, 3. Use an organized list. List every outcome with Blue or with the number 3.

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Flip a coin and roll a 4-sided number cube labeled 1, 2, 3, 4. Make an organized list for the sample space. Then list the outcomes for heads and an even number.	Sample space: (H, 1), (H, 2), (H, 3), (H, 4), (T, 1), (T, 2), (T, 3), (T, 4). Event: (H, 2), (H, 4).
2	Choose one letter from L, M, N and one digit from 5, 6. Use a tree diagram or list. List the outcomes for choosing M or 6.	Sample space: (L, 5), (L, 6), (M, 5), (M, 6), (N, 5), (N, 6). Event: (L, 6), (M, 5), (M, 6), (N, 6).
3	Flip a coin and roll a 5-sided number cube labeled 0, 1, 2, 3, 4. Write the complete sample space.	(H, 0), (H, 1), (H, 2), (H, 3), (H, 4), (T, 0), (T, 1), (T, 2), (T, 3), (T, 4)
4	Spin a color spinner with Red and Blue, then spin a number spinner with 6, 8, 10. List the outcomes for Red and a number greater than 6.	Sample space: (Red, 6), (Red, 8), (Red, 10), (Blue, 6), (Blue, 8), (Blue, 10). Event: (Red, 8), (Red, 10).

PART 2 • APPLY IT

- (Pop, 40), (Hip-Hop, 40), (Electronic, 20), (Electronic, 40)** Pair each music style with each length. Include every pair with Electronic, every pair with 40 minutes, and do not repeat (Electronic, 40).
- Sample space:** (Black, Lightning), (Black, Wave), (Teal, Lightning), (Teal, Wave), (Gold, Lightning), (Gold, Wave). **Event:** (Black, Wave), (Teal, Lightning), (Teal, Wave), (Gold, Wave). Make all six color-design pairs. The event includes every Wave hoodie and every Teal hoodie, with (Teal, Wave) listed once.

CHALLENGE

(Red, Star, 3), (Red, Moon, 3), (Blue, Star, 1), (Blue, Star, 2), (Blue, Star, 3), (Blue, Moon, 1), (Blue, Moon, 2), (Blue, Moon, 3)

Accept equivalent organized lists or tree-diagram orders when all outcomes are present. For events using "or," accept each qualifying outcome once, including outcomes that satisfy both conditions.