

Outcome Detective

List the results that match each event.

GRADE 7 • 7.SP.C.8b

CCSS.Math.Content.7.SP.C.8b "Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., "rolling double sixes")..."

NAME _____

DATE _____

TRACK EACH RESULT

For a compound event, write each outcome in order, because first and second results can matter. Make an organized list, table, or tree, then keep only the outcomes that match the event.

WORKED EXAMPLE

Spinner A has P or Q. Spinner B has X, Y, or Z. List the outcomes for "P and Y."

1. List all ordered pairs: (P,X), (P,Y), (P,Z), (Q,X), (Q,Y), (Q,Z).
2. Keep the pair that matches both parts of the event: (P,Y).

Answer: (P,Y)

PRACTICE 5 problems

- 1** Flip a coin and roll a number cube. List the outcomes for "heads and an odd number."

ANSWER _____

- 2** Flip two coins. Use first, second order. List the outcomes for "exactly one head."

ANSWER _____

- 3** Choose sticker S or T, then roll a 6-sided number cube. Write the full sample space.

ANSWER _____

- 4** Roll a red number cube and a blue number cube. List the outcomes whose sum is 3. Write red first.

ANSWER _____

- 5** Spin a spinner labeled 1, 2, 3, 4 and flip a coin. List the outcomes for "tails and a number greater than 2."

ANSWER _____

APPLY IT Show your work

- 1** In a mobile game, a player picks an avatar color, red, blue, green, or purple, then rolls a 6-sided number cube. List the outcomes for an avatar that is blue or purple and an even roll.

WORK SPACE

ANSWER _____

- 2** A music app chooses a playlist, pop, hip-hop, or indie, then chooses a track number from 1 through 5. List the outcomes for "indie and a track number at most 2."

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A board game rolls a red number cube, then a blue number cube. List all outcomes for "the sum is 7 or the dice match." Then state how many outcomes are in the event.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Flip a coin and roll a number cube. List the outcomes for "heads and an odd number."	(H,1), (H,3), (H,5)
2	Flip two coins. Use first, second order. List the outcomes for "exactly one head."	(H,T), (T,H)
3	Choose sticker S or T, then roll a 6-sided number cube. Write the full sample space.	(S,1), (S,2), (S,3), (S,4), (S,5), (S,6), (T,1), (T,2), (T,3), (T,4), (T,5), (T,6)
4	Roll a red number cube and a blue number cube. List the outcomes whose sum is 3. Write red first.	(1,2), (2,1)
5	Spin a spinner labeled 1, 2, 3, 4 and flip a coin. List the outcomes for "tails and a number greater than 2."	(3,T), (4,T)

PART 2 • APPLY IT

1. **(blue,2), (blue,4), (blue,6), (purple,2), (purple,4), (purple,6)** Pair each allowed color with each even roll, 2, 4, and 6.
2. **(indie,1), (indie,2)** At most 2 means track 1 or track 2, paired with indie.

CHALLENGE

(1,6), (2,5), (3,4), (4,3), (5,2), (6,1), (1,1), (2,2), (3,3), (4,4), (5,5), (6,6); 12 outcomes

Accept equivalent organized lists, tables, or tree-diagram results. Ordered pairs may use colors, words, or abbreviations as long as the order is clear.