

Grade 7 - Compound Events and Simulations - Quiz

Common Core 7.SP.C.8 · maths-pdf.fr/en/

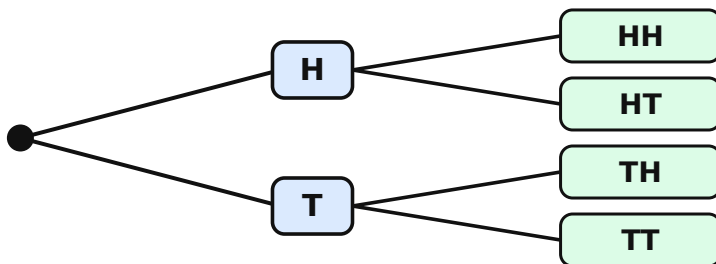
Name: _____ Class: _____ Date: ____/____/____

Answer all 10 multiple-choice questions on the probability of compound events using organized lists, tables, tree diagrams, and simulations. Pick the single best answer, then read the explanation to see why it is right and which common mistake each wrong choice shows. A score of 8 or more means you are ready for the test.

Grade 7 · Common Core State Standards: **7.SP.C.8**

Questions

Question 1



How many outcomes are in the sample space for tossing a coin 3 times?

- A. 6
- B. 8
- C. 3
- D. 9

Question 2

+	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

Two dice are rolled. How many outcomes are there?

- A. 12
- B. 6
- C. 30
- D. 36

Question 3

A coin is tossed twice. What is $P(\text{exactly one head})$?

- A. $\frac{1}{4}$
- B. $\frac{1}{3}$
- C. $\frac{2}{3}$
- D. $\frac{1}{3}$

Question 4

Sandwich \ Drink	Milk	Juice	Water	Tea
Ham	H-M	H-J	H-W	H-T
Egg	E-M	E-J	E-W	E-T
Tuna	T-M	T-J	T-W	T-T

A lunch has 3 sandwiches and 4 drinks.

How many different lunches are possible?

- A. 12
- B. 7
- C. 3
- D. 16

Question 5

Two dice are rolled. What is $P(\text{sum is } 2)$?

- A. $\frac{1}{36}$
- B. $\frac{1}{12}$
- C. $\frac{1}{6}$

D. $\frac{2}{36}$

Question 6

A bag has 1 red and 3 blue marbles. One is drawn and replaced, then another is drawn. P(both blue) is:

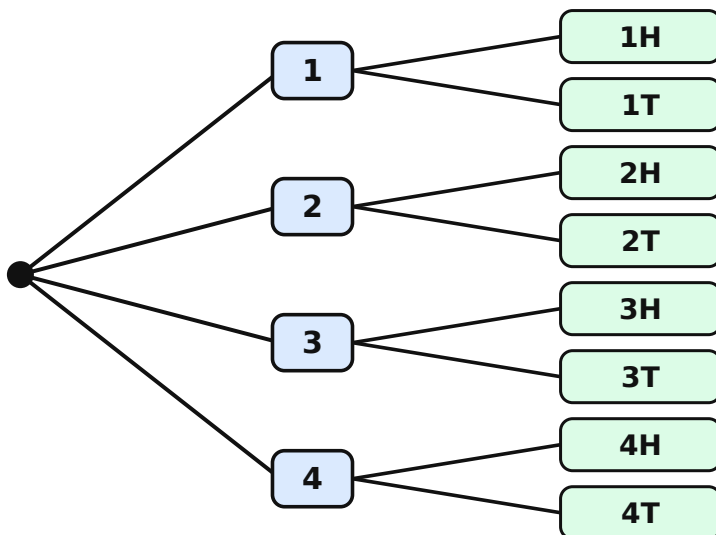
- A. $\frac{3}{4}$
- B. $\frac{1}{2}$
- C. $\frac{9}{16}$
- D. $\frac{6}{16}$

Question 7

In a simulation of a 40% event, which digits could mean success?

- A. 0, 1, 2, 3, 4
- B. 0, 1
- C. 0, 1, 2, 3
- D. 0 through 7

Question 8



A spinner (1, 2, 3, 4) and a coin are used. How many outcomes have an odd number and tails?

- A. 2
- B. 4
- C. 1
- D. 8

Question 9

P(at least one head) in three tosses of a fair coin is:

- A. $\frac{1}{8}$

- B. 7
- C. 10
- D. 20

Question 10

A simulation of 20 trials has 6 successes. What is the estimated probability?

- A. 0.6
- B. 0.2
- C. 3
- D. 0.3

Answers

1. **B** - $2 \times 2 \times 2 = 8$.
2. **D** - $6 \times 6 = 36$.
3. **B** - HT and TH are 2 of 4 outcomes.
4. **A** - $3 \times 4 = 12$.
5. **A** - Only (1, 1) gives a sum of 2.
6. **C** - $\frac{3}{4} \times \frac{3}{4} = \frac{9}{16}$.
7. **C** - 4 of the 10 digits make 40%.
8. **A** - 1T and 3T.
9. **B** - $1 - P(\text{no heads}) = 1 - \frac{1}{8} = \frac{7}{8}$.
10. **D** - $6 \div 20 = 0.3$.

Remember

- A compound event has two or more stages, such as two coin tosses.
- The sample space lists every possible outcome.
- Counting principle: $m \times n$ outcomes for two stages with m and n ways.
- Equally likely outcomes: $P = \text{favorable} \div \text{total}$.
- A simulation uses random numbers to estimate a probability.