Probability sample spaces and counting: Grade 10

Practice worksheet - Maths · Grade 10

Name: _____ Date: _____

Show your working. Answers and explanations follow on a separate page.

Try each task before opening its answer. Give an example or reason, not only a label.

Write an answer and your reason before opening the explanation. Check the reasoning as well as the final answer.

1. P(rolling 5 on a fair six-sided die)?

2. For a fair six-sided die, find P(rolling a number greater than 4).

3. For a fair six-sided die, find P(rolling 7).

4. P(HH) in two fair independent tosses?

5. Two fair independent coins are tossed. Find P(exactly one head).

6. Two fair independent coins are tossed. Find P(at most one head).

7. How many ordered outcomes for two six-sided dice?

8. Two fair independent six-sided dice are rolled. Find P(sum 2).

Practice continued

9. Two fair independent six-sided dice are rolled. Find P(sum 6).

10. Two fair independent six-sided dice are rolled. Find the probability that both show the same number.

11. A bag has 2 green and 6 yellow equal counters. P(green)?

12. If P(rain) = 0.3, what is P(no rain) for the same defined period and model?

13. Are the eleven possible two-dice totals equally likely?

14. Can the probability of an event be 1.2?

Answers and explanations

Answer key - Maths · Grade 10

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1. 1/6.

One favourable face out of six.

2. 1/3.

Faces 5 and 6 give 2/6.

3. 0.

Seven is not a possible face.

4. 1/4.

One of four ordered outcomes.

5. 1/2.

HT and TH give 2/4.

6. 3/4.

TT, HT and TH qualify.

7. 36.

Six choices for each die.

8. 1/36.

Only (1, 1).

9. 5/36.

(1, 5), (2, 4), (3, 3), (4, 2), (5, 1).

10. 1/6.

Six doubles out of 36.

11. 1/4.

2/8 simplifies to 1/4.

12. 0.7.

Complement probabilities add to one.

13. No.

Different totals have different numbers of ordered routes.

14. No.

An event cannot include more than all possible outcomes.