



Probability: Simple & Compound Events

Name: _____

Grade: 7 _____

Date: _____

Find probability of simple and compound events, compare theoretical vs experimental, use tree diagrams, and analyze errors.

Part 1 · Simple Probability SIMPLE

- 1. Probability of tails in fair coin?
- 2. Probability of rolling even on die?
- 3. Probability of picking blue from bag with 3 blue, 2 red?
- 4. Probability of picking red from bag above?
- 5. Probability of picking green from bag above?
- 6. Probability of rolling 1 or 6 on die?

Part 2 · Compound Probability COMPOUND

- 7. Probability of heads then tails in 2 coin flips?

(8. Probability of rolling 2 then 5 on two dice?

(9. Probability of picking blue then red from bag above?

(10. Probability of picking two blues in a row (no replacement)?

(11. Probability of rolling odd then even on die?

(12. Probability of rolling two 4s in a row?

Part 3 · Theoretical vs Experimental COMPARE

(13. Theoretical probability of heads in coin?

(14. If coin flipped 100 times, heads 48 times, experimental probability?

(15. If die rolled 60 times, 10 times a 6, experimental probability?

(16. If bag has 3 blue, 2 red, 1 green, theoretical probability of green?

(17. If green picked 8 out of 60 times, experimental probability?

(18. Which probability is based on actual results?

Part 4 · Tree Diagrams & Outcomes TREE

19. How many outcomes for 2 coin flips?

20. List all outcomes for 2 coin flips.

21. How many outcomes for rolling 2 dice?

22. List all outcomes for picking blue/red from bag above.

23. Probability of getting at least one heads in 2 coin flips?

24. Reflection: Most helpful strategy? _____

Part 5 · Error Analysis

ERROR

25. Error: Probability of heads in coin is $\frac{1}{4}$. Correct & mistake?

26. Error: Probability of rolling 2 then 5 is $\frac{2}{11}$. Correct & why?

27. Error: Probability of picking two blues in a row is $\frac{9}{36}$. Correct & why?

Part 6 · Challenge & Reflection

CHALLENGE

28. Probability of rolling 2,3,4 in order on three dice?

29. Probability of picking blue, red, blue from bag above?

(30. Probability of getting all tails in 3 coin flips?

(31. Reflection: Most helpful strategy? _____

Answer Key

1. $\frac{1}{2}$
2. $\frac{1}{2}$
3. $\frac{1}{2}$
4. $\frac{1}{3}$
5. 0
6. $\frac{1}{3}$
7. $\frac{1}{4}$
8. $\frac{1}{36}$
9. $\frac{3}{10}$
10. $\frac{1}{10}$
11. $\frac{1}{4}$
12. $\frac{1}{36}$
13. $\frac{1}{2}$
14. $\frac{48}{100}=0.48$
15. $\frac{10}{60}=\frac{1}{6}$
16. $\frac{1}{6}$
17. $\frac{8}{60}=\frac{2}{15}$
18. Experimental
19. 4
20. HH, HT, TH, TT
21. 36
22. BB, BR, RB, RR
23. $\frac{3}{4}$
24. Varies
25. $\frac{1}{2}$ / only two outcomes
26. $\frac{1}{36}$ / multiply not add
27. $\frac{1}{10}$ / multiply correct fractions
28. $\frac{1}{216}$
29. $\frac{3}{30}=\frac{1}{10}$
30. $\frac{1}{8}$
31. Varies

Accept equivalent forms. Reflection varies.