

12-8

Practice

Form K

Probability of Compound Events

You spin a spinner that has 8 equal-sized sections numbered 1 to 8. Find each probability.

1. $P(2 \text{ or } 4) \frac{1}{4}$

2. $P(\text{odd or } 6) \frac{5}{8}$

3. $P(\text{multiple of } 2 \text{ or odd}) 1$

4. $P(\text{odd or greater than } 3) \frac{7}{8}$

5. $P(\text{even or less than } 4) \frac{3}{4}$

6. $P(\text{multiple of } 3 \text{ or multiple of } 2) \frac{5}{8}$

7. **Open-Ended** What is an example of a compound event composed of two mutually exclusive events when you spin a spinner numbered 1 to 8?

Answers may vary. Sample: spinning an odd number or spinning a two

You roll a black number cube and a white number cube. Find each probability.

8. $P(\text{black } 4 \text{ and white } 4) \frac{1}{36}$

9. $P(\text{black even and white even}) \frac{1}{4}$

10. $P(\text{black } 3 \text{ or } 4 \text{ and white } 1 \text{ or } 6) \frac{1}{9}$

11. $P(\text{black } 1 \text{ and white odd}) \frac{1}{12}$

12. $P(\text{black even and white greater than } 2) \frac{1}{3}$

12-8**Practice** (continued)

Form K

Probability of Compound Events

13. The probability that Hannah will be late for dinner is $\frac{1}{2}$. What is the probability that she will be late for dinner two nights in a row? $\frac{1}{4}$

You choose a tile at random from a bag containing 4 tiles with R, 2 tiles with S, and 3 tiles with T. You replace the tile and then choose again. Find each probability.

14. $P(\text{both S})$ $\frac{4}{81}$

15. $P(\text{both T})$ $\frac{1}{9}$

16. $P(\text{R then T})$ $\frac{4}{27}$

17. $P(\text{T then S})$ $\frac{2}{27}$

You choose a marble at random from a bag containing 3 yellow marbles, 8 red marbles, and 4 blue marbles. You pick a second marble without replacing the first. Find each probability.

18. $P(\text{red then blue})$ $\frac{16}{105}$

19. $P(\text{both yellow})$ $\frac{1}{35}$

20. $P(\text{yellow then blue})$ $\frac{2}{35}$

21. $P(\text{both red})$ $\frac{4}{15}$

22. The committee to plan the homecoming dance has 4 juniors and 6 seniors. To decide who will plan the decorations, the advisor puts the names of the students in a hat and randomly picks one name. Then the advisor picks another name without replacing the first. What is the probability that both students picked are seniors? $\frac{1}{3}$