

Independent and Dependent  
Events Worksheet

Name: \_\_\_\_\_

Date: \_\_\_\_\_ Section: \_\_\_\_\_

1-4. Tell whether the events are dependent or independent.

1. One tossed coin landing heads and the next landing tails. \_\_\_\_\_

2. Rolling two sixes in a row on a number cube \_\_\_\_\_

3. Drawing a red tile from a bag and then drawing a green tile  
after replacing the first tile \_\_\_\_\_

4. Drawing a blue tile from a bag and then drawing a red tile without  
replacing the first tile \_\_\_\_\_

5-7. These problems refer to rolling a number cube, then spinning a spinner  
with the letters A-H on it. Find each probability. Show all work.

5.  $P(\text{rolling a 2, spinning an A})$  \_\_\_\_\_

6.  $P(\text{rolling an even number, spinning a vowel})$  \_\_\_\_\_

7.  $P(\text{rolling a number less than 3, spinning a consonant})$  \_\_\_\_\_

8-11. Tell whether the events are independent or dependent and then find  
each probability. There are 5 gray, 4 red, 5 white, 2 green, and 2 navy  
marbles in a hat. Show all work.

8.  $P(\text{red, not green})$  with replacement

9.  $P(\text{navy, white})$  without replacement

10.  $P(\text{gray, gray})$  with replacement

11.  $P(\text{gray, gray})$  without replacement

12-14. You roll a cube with the numbers 13, 16, 18, 20, 22, and 24 on it. You then spin a spinner which has 6 sections. The letters on the spinner are E, B, G, K, D, and H. Find each probability. Show all work.

12.  $P(G, \text{prime number})$

13.  $P(20, K)$

14.  $P(\text{not even number, B or D})$

15-17. Suppose that two M&M's are drawn from a bag of M&M's that contains 5 green M&M's, 8 brown M&M's, 6 red M&M's, 4 orange M&M's and 9 blue M&M's. The first M&M is replaced before the second M&M is drawn. Find each probability. Show all work.

15.  $P(\text{red, blue})$

16.  $P(\text{not orange, green})$

17.  $P(\text{brown, brown})$

18-20. Suppose two M&M's are drawn from the bag above. The first M&M is not replaced before the second M&M is drawn. Find each probability. Show all work.

18.  $P(\text{blue, blue})$

21.  $P(\text{red, red})$

19.  $P(\text{brown, not red})$

22.  $P(\text{orange, red, blue, red})$

20.  $P(\text{orange, green})$