

14-3

Practice

ALL WORK ON LOOSE LEAF**Probability of Compound Events**

A bag contains 5 red, 3 brown, 6 yellow, and 2 blue marbles. Once a marble is selected, it is not replaced. Find each probability.

1. $P(\text{brown, then yellow, then red})$
2. $P(\text{red, then red, then blue})$
3. $P(\text{yellow, then yellow, then not blue})$
4. $P(\text{brown, then brown, then not yellow})$

A die is rolled and a card is drawn from a standard deck of 52 cards. Find each probability.

5. $P(6 \text{ and king})$
6. $P(\text{odd number and black})$
7. $P(\text{less than 3 and heart})$
8. $P(\text{greater than 1 and black ace})$

One card is drawn from a standard deck of 52 cards. Find each probability.

11. $P(\text{spade or numbered card})$
12. $P(\text{ace or red queen})$
13. $P(\text{red or not face card})$
14. $P(\text{heart or not queen})$

Tiles numbered 1 through 25 are placed in a box. Tiles numbered 11 through 30 are placed in a second box. One tile is randomly drawn from each box. Find each probability.

17. $P(\text{both are greater than 15 and less than 20})$
18. The first tile is greater than 10 and the second tile is less than 25 or even.
19. The first tile is a multiple of 3 or prime and the second tile is a multiple of 5.
20. The first tile is less than 9 or odd and the second tile is a multiple of 4 or less than 21.
21. **WEATHER** The forecast predicts a 40% chance of rain on Tuesday and a 60% chance on Wednesday. If these probabilities are independent, what is the chance that it will rain on both days?
- FOOD** Tomaso places favorite recipes in a bag for 4 pasta dishes, 5 casseroles, 3 types of chili, and 8 desserts.
22. If Tomaso chooses one recipe at random, what is the probability that he selects a pasta dish or a casserole?
23. If Tomaso chooses one recipe at random, what is the probability that he does *not* select a dessert?
24. If Tomaso chooses two recipes at random without replacement, what is the probability that the first recipe he selects is a casserole and the second recipe he selects is a dessert?