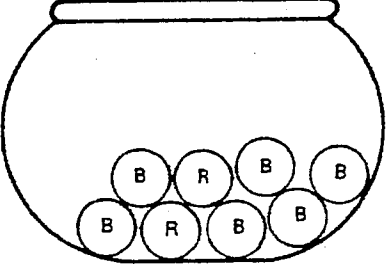
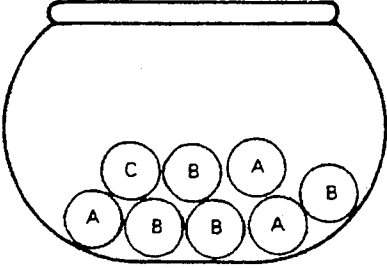


SKILL PRACTICE

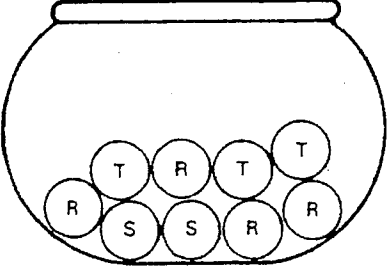
Suppose you draw marbles from these jars without replacement.
Give each probability as a fraction in simplest form.



1. $P(B, R) = \frac{3}{4} \times \frac{2}{7} = \frac{3}{14}$
2. $P(B, B) =$ _____
3. $P(R, R) =$ _____
4. $P(R, B) =$ _____
5. $P(R, R, B) =$ _____
6. $P(B, B, B) =$ _____



7. $P(A, B) =$ _____
8. $P(A, C) =$ _____
9. $P(B, A, C) =$ _____
10. $P(B, A, A) =$ _____
11. $P(B, B, A) =$ _____
12. $P(A, A, A) =$ _____



13. $P(R, S, T) =$ _____
14. $P(S, R, S) =$ _____
15. $P(R, T, S) =$ _____
16. $P(R, R, T) =$ _____
17. $P(T, T, T) =$ _____
18. $P(T, R, R) =$ _____

Check yourself. Here are the scrambled answers:

- $\frac{1}{84}$ $\frac{1}{63}$ $\frac{1}{56}$ $\frac{1}{28}$ $\frac{1}{28}$ $\frac{1}{28}$ $\frac{1}{21}$ $\frac{1}{21}$ $\frac{3}{56}$ $\frac{1}{14}$ $\frac{1}{14}$ $\frac{1}{14}$ $\frac{3}{28}$ $\frac{3}{14}$ $\frac{3}{14}$ $\frac{3}{14}$ $\frac{5}{14}$ $\frac{15}{28}$

Challenge!

CALCULATOR APPLICATION

A container has 36 Ping-Pong balls numbered 1–36.

Look at the rules
for these two games:

Game 1

- Guess five numbers. (You can choose the same number more than once.)
- Mix the balls and draw one without looking.
- Replace the ball, mix, and draw another ball.
- Repeat until five balls have been drawn.

Game 2

- Guess five different numbers.
- Mix the balls.
- Without looking, draw five balls *without* replacement.

You win if you guessed all five numbers that were drawn.

26. Which game has $P(\text{winning})$ equal to

a. $\frac{1}{36} \times \frac{1}{36} \times \frac{1}{36} \times \frac{1}{36} \times \frac{1}{36}$?

b. $\frac{5}{36} \times \frac{4}{35} \times \frac{3}{34} \times \frac{2}{33} \times \frac{1}{32}$?

27. What is $P(\text{winning})$

a. Game 1?

b. Game 2?

28. Which game would you be more likely to win?

