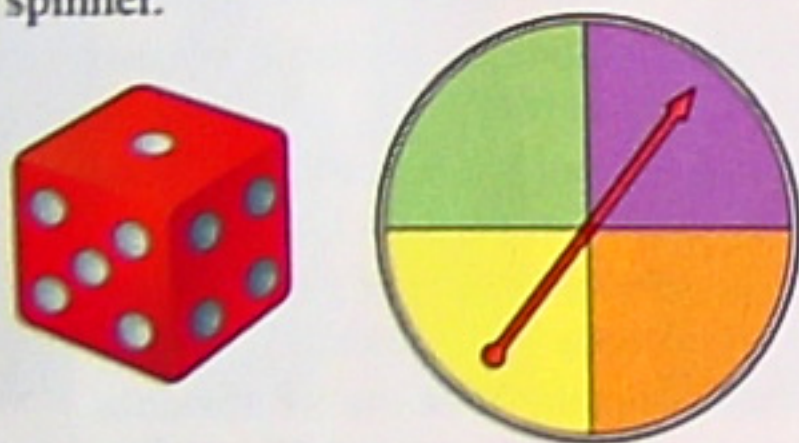


A Checking

5. Use the tree diagram you made in step A on page 408 to calculate each theoretical probability.
- $P(\text{Rowyn beside Rishi})$
 - $P(\text{Rowyn not beside Rishi})$
 - $P(\text{either Rowyn or Carina, but not both, on the outside})$

B Practising

6. Suppose that you roll the die and spin the spinner.



Use an organized list to determine the probability of each event.

- $P(3 \text{ and yellow})$
 - $P(\text{anything except 3 and yellow})$
 - $P(\text{number} > 3 \text{ and purple})$
7. a) Create a tree diagram to show all the possible outcomes for tossing three coins.
 b) What is the probability of getting one Tail?

10. Kaycee has won a contest.

To determine the amount of her prize, she must spin this spinner twice. She will receive the sum of her two spins.



- Create a tree diagram to show all the possible outcomes.
- What is the probability that Kaycee will receive more than the minimum amount but less than the maximum amount?
- What is the probability that Kaycee will receive more than \$500?

11. Anthony, Peter, Francis, and Christopher are in a race. The first three to finish will receive ribbons. Which is more probable—that both Anthony and Peter will receive ribbons, or that Peter will finish ahead of Francis and Christopher?

C Extending

12. Deanna and Carol are playing a game. They roll a die twice and add the numbers they roll. A sum of 5 scores a point.
- What is the probability of rolling a sum of 5?
 - Deanna rolled a sum of 5 on her first

In lesson 12.3,
ways for four

There were four

Only three poss

Only two possi

Only one possi

You can use fac

$$4! = 4 \times 3 \times 2 \times 1 = 24$$

So, 4 factorial is

Factorial notation
for three differ

The number of

The number of

1. Write each

$$a) 8 \times 7 \times 6$$

$$b) 12 \times 11 \times 10$$

2. Evaluate e

$$a) 3! \quad b) 4!$$

3. How many

in a line?