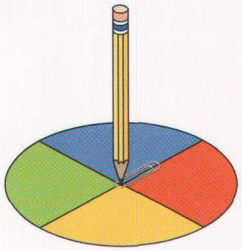
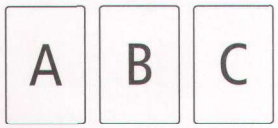
5.30 - Questions Handout #s 6 - 16

For help with questions 6 to 8, refer to Example 1.

Use the spinner and cards to answer questions 6 to 8.





6. a) Draw a tree diagram for the spinner and cards.

b) Organize the outcomes in a table for the spinner and cards.

7. Use an organizer from question 6 to find the predicted probability for each situation.

a) blue and an A

b) yellow and a B

c) green and a C

8. Use an organizer from question 6 to find the predicted probability for each situation.

a) green, and an A or a B

b) yellow or red, and a C

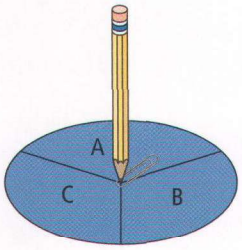
c) any colour and a B

d) blue and any letter

For help with questions 9 and 10, refer to Example 2.

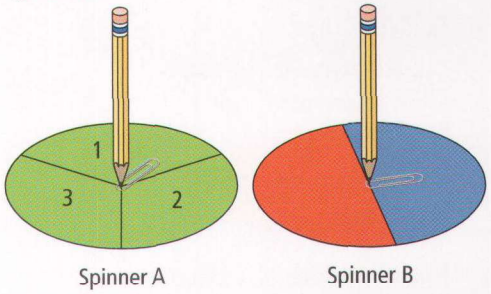
9. a) Draw a tree diagram for spinning the spinner twice.

b) What is the predicted probability of spinning two Cs?



c) What is the predicted probability of spinning an A and a B?

10. a) Draw a tree diagram for spinning both spinners.

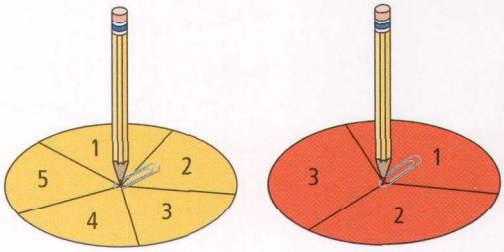


b) What is the predicted probability of spinning a 1 and red?

c) What is the predicted probability of spinning a 3 and blue?

Apply

11. Pina and Paul play a spinner game. First, Pina chooses a spinner combination. If Paul spins that combination, he gets a point. Otherwise, Pina gets the point. State each predicted probability.



a) a 5 and a 1

b) a 2 and a 3

c) a number less than 3 and a 1

d) a prime number and a 2

12. It is Paul's turn to choose the spinner combination for the game in question 11. He chooses the sums of the spins. State each predicted probability.

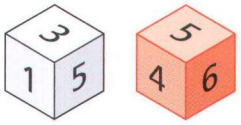
a) a sum of 2

b) a sum of 7

c) a sum of 4

d) a sum greater than 5

13. Two number cubes are rolled.

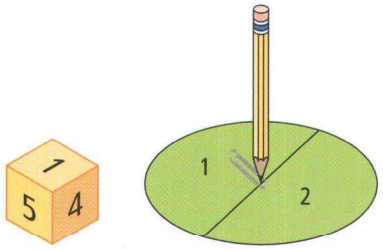


a) What is the probability of rolling a 6 on the white number cube? on the red number cube?

b) The predicted probability of rolling a 6 on both number cubes is $\frac{1}{36}$. Show why this is correct.

Chapter Problem

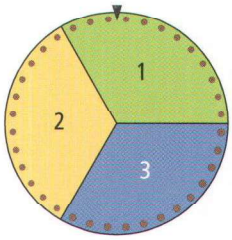
14. A version of *Into the Pond* uses a number cube and a spinner. Roll the number cube. Then, spin the spinner. Multiply.



a) What are the possible products when you multiply the results of the spinner and the number cube?

b) What is the predicted probability of getting each product?

15. A carnival game uses a spinner. A player must spin the same number more than once to win.



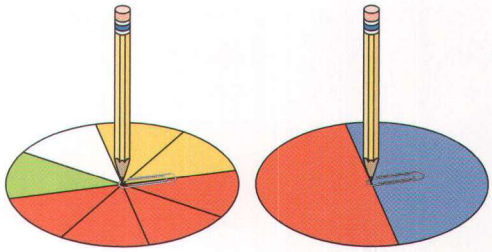
a) What is the predicted probability of spinning the same number twice in a row?

b) What is the predicted probability of spinning the same number three times in a row?

c) Which option from parts a) and b) do you think the game operator would use? Explain.

Try This!

16. Fred spins the spinners and creates a new colour from the result of the spins.



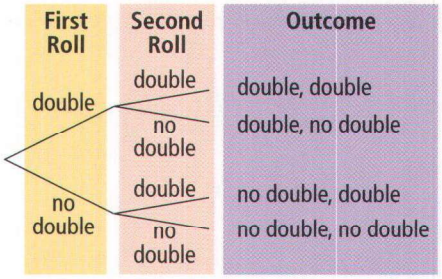
a) What is the predicted probability that you will spin purple? Hint: Red and blue mix together to make purple.

b) Make the spinners and carry out the experiment. What is the experimental probability of spinning purple?

c) Explain why there is a difference between the experimental and predicted probabilities.

Extend

17. In Monopoly®, players use two number cubes. A player that rolls a double three times in a row goes to jail.



a) Explain why the probability of rolling a double is $\frac{1}{6}$ and the probability of not rolling a double is $\frac{5}{6}$.

b) What is the predicted probability of rolling a double twice in two rolls?

c) Can you develop a method for calculating the probability of rolling a double twice in two rolls without using an organizer?

d) Use your method to find the predicted probability of rolling a double three times in a row. Check your calculation by drawing a tree diagram.