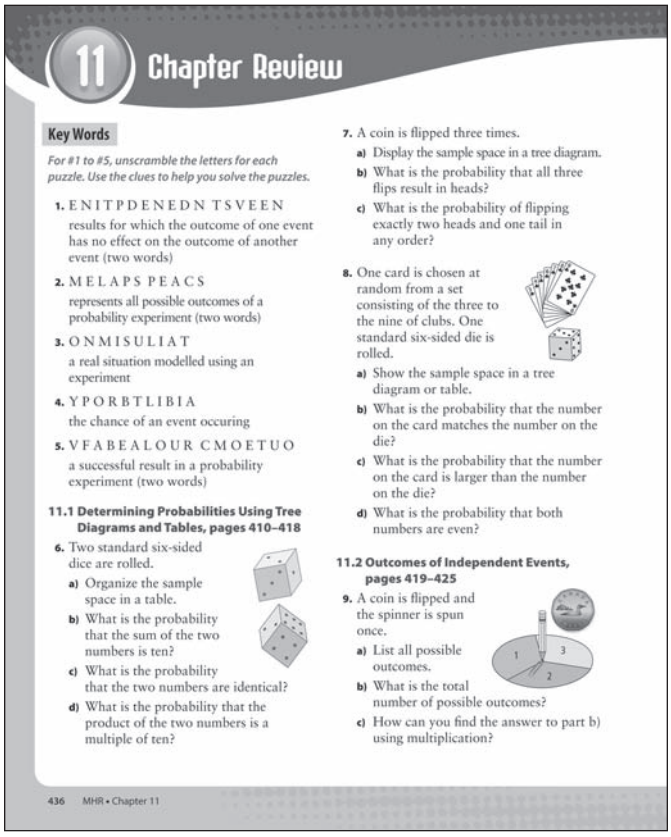
Chapter Review 11



11 Chapter Review

Key Words

For #1 to #5, unscramble the letters for each puzzle. Use the clues to help you solve the puzzles.

1. ENITPDENEDN TSVEEN
   results for which the outcome of one event has no effect on the outcome of another event (two words)
2. MELAPS PEACS
   represents all possible outcomes of a probability experiment (two words)
3. ONMISULIAT
   a real situation modelled using an experiment
4. YPORBTLIBIA
   the chance of an event occuring
5. VFABEALOUR CMOETUO
   a successful result in a probability experiment (two words)

11.1 Determining Probabilities Using Tree Diagrams and Tables, pages 410–418

6. Two standard six-sided dice are rolled.
   a) Organize the sample space in a table.
   b) What is the probability that the sum of the two numbers is ten?
   c) What is the probability that the two numbers are identical?
   d) What is the probability that the product of the two numbers is a multiple of ten?
7. A coin is flipped three times.
   a) Display the sample space in a tree diagram.
   b) What is the probability that all three flips result in heads?
   c) What is the probability of flipping exactly two heads and one tail in any order?
8. One card is chosen at random from a set consisting of the three to the nine of clubs. One standard six-sided die is rolled.
   a) Show the sample space in a tree diagram or table.
   b) What is the probability that the number on the card matches the number on the die?
   c) What is the probability that the number on the card is larger than the number on the die?
   d) What is the probability that both numbers are even?

11.2 Outcomes of Independent Events, pages 419–425

9. A coin is flipped and the spinner is spun once.
   a) List all possible outcomes.
   b) What is the total number of possible outcomes?
   c) How can you find the answer to part b) using multiplication?

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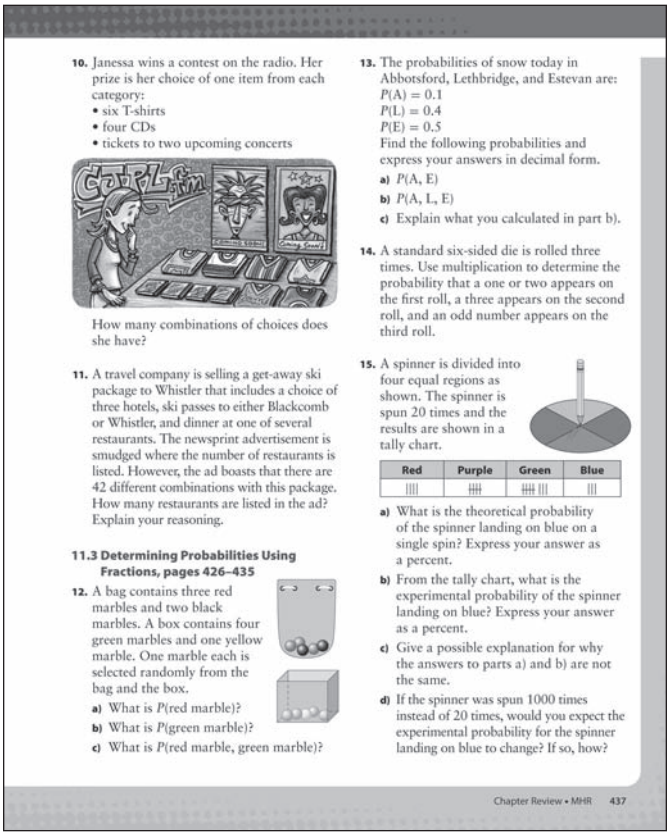

10. Janessa wins a contest on the radio. Her prize is her choice of one item from each category:
    • six T-shirts
    • four CDs
    • tickets to two upcoming concerts

    How many combinations of choices does she have?
11. A travel company is selling a get-away ski package to Whistler that includes a choice of three hotels, ski passes to either Blackcomb or Whistler, and dinner at one of several restaurants. The newsprint advertisement is smudged where the number of restaurants is listed. However, the ad boasts that there are 42 different combinations with this package. How many restaurants are listed in the ad? Explain your reasoning.

11.3 Determining Probabilities Using Fractions, pages 426–435

12. A bag contains three red marbles and two black marbles. A box contains four green marbles and one yellow marble. One marble each is selected randomly from the bag and the box.
    a) What is P(red marble)?
    b) What is P(green marble)?
    c) What is P(red marble, green marble)?
13. The probabilities of snow today in Abbotsford, Lethbridge, and Estevan are:
    $P(A) = 0.1$
    $P(L) = 0.4$
    $P(E) = 0.5$
    Find the following probabilities and express your answers in decimal form.
    a) $P(A, E)$
    b) $P(A, L, E)$
    c) Explain what you calculated in part b).
14. A standard six-sided die is rolled three times. Use multiplication to determine the probability that a one or two appears on the first roll, a three appears on the second roll, and an odd number appears on the third roll.
15. A spinner is divided into four equal regions as shown. The spinner is spun 20 times and the results are shown in a tally chart.

Red	Purple	Green	Blue
||||	||||	|||| |||	|||

    a) What is the theoretical probability of the spinner landing on blue on a single spin? Express your answer as a percent.
    b) From the tally chart, what is the experimental probability of the spinner landing on blue? Express your answer as a percent.
    c) Give a possible explanation for why the answers to parts a) and b) are not the same.
    d) If the spinner was spun 1000 times instead of 20 times, would you expect the experimental probability for the spinner landing on blue to change? If so, how?

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***MathLinks 8*, pages 436–437**

Suggested Timing
40–50 minutes

Materials
• ruler

Blackline Masters
Master 18 Concept Map
BLM 11–5 Section 11.1 Extra Practice
BLM 11–7 Section 11.2 Extra Practice
BLM 11–10 Section 11.3 Extra Practice

Planning Notes

Allow students to work in pairs for #1 to #5. The scrambled words are lengthy and some students may have difficulty identifying the terms on their own. Have students work independently on the remaining questions. If students encounter difficulties, provide an opportunity for them to discuss strategies with other students. Encourage them to refer to their chapter Foldable and previously completed questions in the related sections of the student resource.

Consider having students make a list of the questions that they found difficult. They can then use the list to help them prepare for the practice test.

Literacy Link Have students use **Master 18 Concept Map** to develop a second concept map about probability showing what they know now, without looking at the one they did at the beginning of the chapter.

Meeting Student Needs

- Allow students to complete the chapter review using a combination of oral descriptions, diagrams, and written answers.
- Encourage students to use their chapter Foldable and to add new notes if they wish.
- Students who require more practice on a particular topic may refer to **BLM 11–5 Section 11.1 Extra Practice**, **BLM 11–7 Section 11.2 Extra Practice**, and **BLM 11–10 Section 11.3 Extra Practice**.

ELL

- Encourage students to work with a partner and practise the Key Words using flash cards.

Gifted and Enrichment

- Some students may already be familiar with the skills handled in this review. To provide enrichment and extra challenge, go to www.mathlinks8.ca and follow the links.

Common Errors

- Some students may make errors when creating the large tables for #6 and #8.

R_x Reinforce the importance of consistently separating both numbers with a comma, and always writing the row number first.

Assessment	Supporting Learning
Assessment *for* Learning	
Chapter 11 Review The Chapter 11 Review is an opportunity for students to assess themselves by completing selected questions in each section and checking their answers against the answers in the back of the student resource.	• Have students check the contents of the What I Need to Work On booklet of their chapter Foldable and do at least one question related to each listed item. • Have students revisit any section that they are having difficulty with prior to working on the chapter test.
Literacy Link Have students develop a second concept map about probability showing what they know now, without looking at the one they completed at the beginning of the chapter.	• Have students compare their two concept maps and highlight any items they included in the second concept map that were not in the first. Emphasize the amount of learning this difference represents.