

Chapter 4 Review

Key Words

For #1 to #4, unscramble the letters for each term. Use the clues to help you.

1. L G Y N O P O

A **_____** is a closed figure with sides that are line segments.

2. I R I S L M A

_____ figures have equal corresponding angles and proportional corresponding side lengths.

3. C A S E L O T C A F R

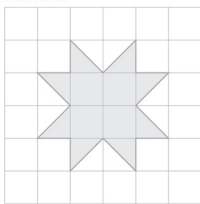
The **_____** is the constant amount by which any dimension of a shape is enlarged or reduced.

4. R R O O P P T I N O

A **_____** is a statement that says two ratios are equal.

4.1 Enlargements and Reductions, pages 130–138

5. Use grid paper to draw the design using each scale factor.



- a) scale factor of 2
b) scale factor of 0.5

6. Draw an image of the egg design that is three times as large as the original.



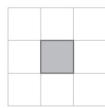
Art Link

Pysanky is the traditional Eastern European art that uses beeswax and dyes to create designs on eggs.

7. Draw a reduction of the arrow that is half as large as the original.



8. Draw an image of the square to illustrate each of the following.



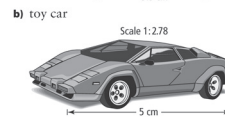
- a) a scale factor equal to 1
b) a scale factor greater than 1
c) a scale factor less than 1

4.2 Scale Diagrams, pages 139–145

9. An actual CD jewel case measures 14.3 cm. Determine the scale factor used to create the image.



10. Determine the actual length of each object from its scale diagram.

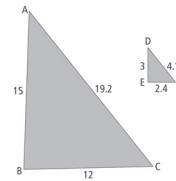


11. The scale for an image of a tower is 1 cm represents 12.5 m. If the actual tower measures 108.75 m in height, what is its height on the drawing?

12. A highway is 600 km in length. If the length of the highway on a map is 6 cm, what is the scale factor? Hint: 1 km = 100 000 cm.

4.3 Similar Triangles, pages 146–153

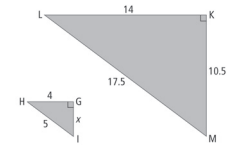
13. Are these triangles similar? Explain.



14. $\triangle UVW$ is similar to $\triangle UYZ$. Determine the length x .

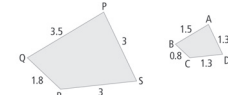


15. Given that $\triangle GHI$ is similar to $\triangle KLM$, what is the length of side IG ?



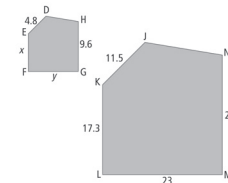
4.4 Similar Polygons, pages 154–159

16. Determine if the two polygons are similar.



17. The sides of one quadrilateral measure 3 cm, 9 cm, 12 cm, and x . The corresponding sides of a similar quadrilateral measure 2.25 cm, 6.75 cm, 9 cm, and 13.5 cm. What is the value of x ?

18. The pentagons DEFGH and JKLMN are similar. Determine the missing side lengths, to the nearest tenth.



MathLinks 9, pages 160–161

Suggested Timing

40–50 minutes

Materials

- grid paper
- ruler
- protractor

Blackline Masters

- Master 8 Centimetre Grid Paper
- Master 9 0.5 Centimetre Grid Paper
- Master 10 2 Centimetre Grid Paper
- BLM 4–5 Section 4.1 Extra Practice
- BLM 4–7 Section 4.2 Extra Practice
- BLM 4–9 Section 4.3 Extra Practice
- BLM 4–11 Section 4.4 Extra Practice

Planning Notes

Have students work individually. Make copies of **Master 8 Centimetre Grid Paper**, **Master 9 0.5 Centimetre Grid Paper**, and **Master 10 2 Centimetre Grid Paper** available for students to draw scale diagrams for #5 to 8.

If students encounter difficulties, provide an opportunity for them to discuss strategies with a classmate. Remind them to refer to their Foldable, spider map, worked exercises for the section, or the modelled examples in the appropriate section of the student resource.

When they are done, have students make a list of questions they found difficult. They can use the list to help them prepare for the practice test. Consider discussing the questions that present difficulties to a significant number of students. Encourage students who successfully answered those questions to discuss their strategies and their solutions.

Meeting Student Needs

- Allow students to complete the chapter review using a combination of oral responses, written responses, and diagrams.
- Encourage students to use their Foldable and to add new notes if they wish.
- For #12, you may need to prompt students to convert to the same units.

- Encourage students to use the strategy of their choice to answer questions, when applicable.
- Students who require more practice on a particular topic may refer to **BLM 4–5 Section 4.1 Extra Practice**, **BLM 4–7 Section 4.2 Extra Practice**, **BLM 4–9 Section 4.3 Extra Practice**, and **BLM 4–11 Section 4.4 Extra Practice**.

ELL

- Explain that a *jewel case* is a storage case for a CD.

Gifted and Enrichment

- Some students may already be familiar with the skills handled in this review. To provide enrichment and extra challenge for gifted students, go to www.mathlinks9.ca and follow the links.

Assessment	Supporting Learning
Assessment for Learning	
<p>Chapter 4 Review The Chapter 4 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.</p>	<ul style="list-style-type: none"> • Have students check the contents of the What I Need to Work On section of their 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.