

Lesson 1 Units of Length

$$1 \text{ m} = 100 \text{ cm}$$

$$1 \text{ m} = 1000 \text{ mm}$$

$$1 \text{ km} = 1000 \text{ m}$$

$$200 \text{ cm} = \underline{\quad ? \quad} \text{ m}$$

$$3 \text{ km} = \underline{\quad ? \quad} \text{ m}$$

$$100 \text{ cm} = 1 \text{ m}$$

$$1 \text{ km} = 1000 \text{ m}$$

$$200 \text{ cm} = (200 \div 100) \text{ m}$$

$$3 \text{ km} = (3 \times 1000) \text{ or } 3000 \text{ m}$$

$$200 \text{ cm} = \underline{\quad 2 \quad} \text{ m}$$

$$3 \text{ km} = \underline{\hspace{2cm}} \text{ m}$$

Complete the following.

a

1. $6 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$

2. $2 \text{ m} = \underline{\hspace{2cm}} \text{ mm}$

3. $3 \text{ km} = \underline{\hspace{2cm}} \text{ m}$

4. $400 \text{ cm} = \underline{\hspace{2cm}} \text{ m}$

5. $4000 \text{ mm} = \underline{\hspace{2cm}} \text{ m}$

6. $300 \text{ cm} = \underline{\hspace{2cm}} \text{ m}$

b

$3 \text{ m} = \underline{\hspace{2cm}} \text{ mm}$

$6 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$

$4 \text{ km} = \underline{\hspace{2cm}} \text{ m}$

$7 \text{ m} = \underline{\hspace{2cm}} \text{ mm}$

$4 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$

$32 \text{ km} = \underline{\hspace{2cm}} \text{ m}$

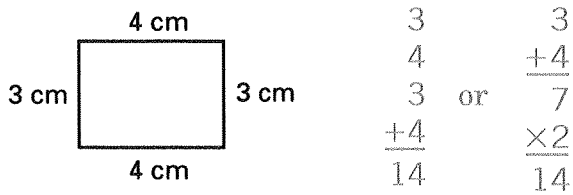
7. Becky threw the ball 8 m. Zachary threw the ball 840 cm. How many centimetres did each person throw the ball? Who threw it farther? How much farther?

Becky threw the ball cm.

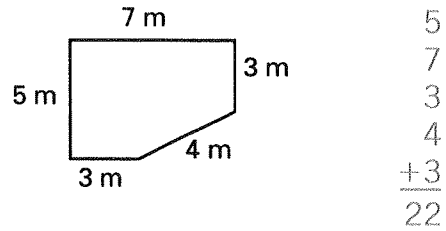
Zachary threw the ball cm.

 threw the ball cm farther.

Lesson 2 Perimeter



perimeter: 14 cm

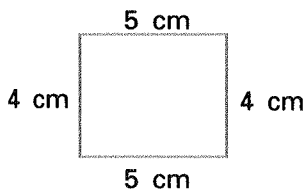


perimeter: _____ m

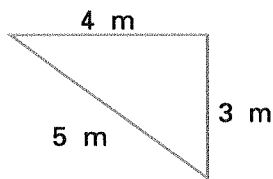
Find the perimeter of each figure.

a

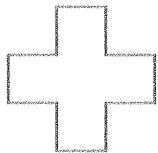
1. _____ cm



2. _____ m

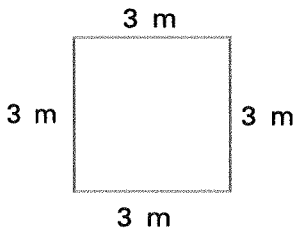


3. _____ cm



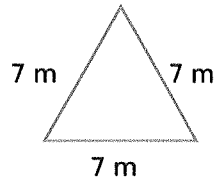
Each side is 1 cm long.

4. _____ m

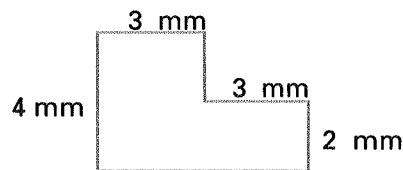


b

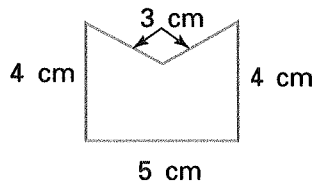
_____ m



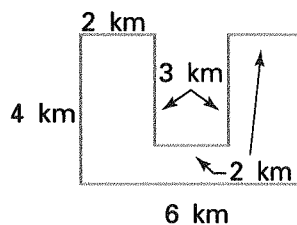
_____ mm



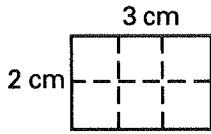
_____ cm



_____ km

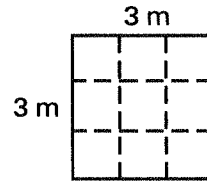


Lesson 3 Area



$$\begin{array}{r} 3 \\ \times 2 \\ \hline 6 \end{array}$$

area: 6 cm²



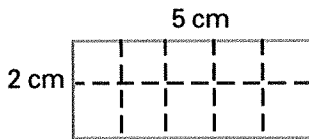
$$\begin{array}{r} 3 \\ \times 3 \\ \hline 9 \end{array}$$

area: 9 m²

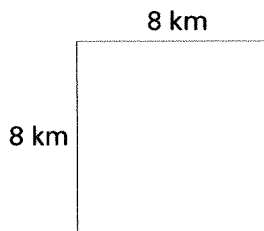
Find the area of each rectangle.

a

1. _____ cm²

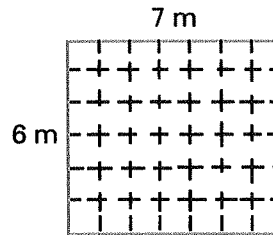


2. _____ km²

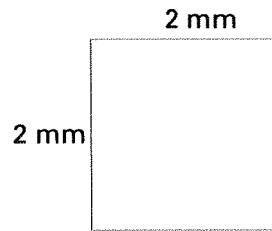


b

_____ m²



_____ mm²



	<i>Length</i>	<i>Width</i>	<i>Area</i>
3.	8 m	5 m	_____ m ²
4.	12 cm	8 cm	_____ cm ²
5.	142 m	57 m	_____ m ²
6.	36 km	12 km	_____ km ²
7.	18 mm	15 mm	_____ mm ²

Lesson 3 Problem Solving

Solve each problem.

1. A garden has the shape of a rectangle. It is 24 m long and 10 m wide. What is the perimeter of the garden?

The perimeter is _____ m.

2. A baseball diamond is a square with each side 27 m long. Find the perimeter and the area of the diamond.

The perimeter is _____ m.

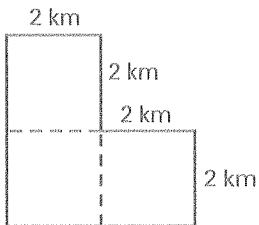
The area is _____ m^2 .

3. A square-shaped lot is 125 m on each side. What is the perimeter of the lot? What is the area?

The perimeter is _____ m.

The area is _____ m^2 .

4. Find the perimeter and the area of the following figure.



The perimeter is _____ km.

The area is _____ km^2 .

5. Use the front cover of this book. Measure its length and its width to the nearest centimetre. Find the perimeter of the cover. Find the area of the cover.

The length of the cover is _____ cm.

The width of the cover is _____ cm.

The perimeter of the cover is _____ cm.

The area of the cover is _____ cm^2 .

1.

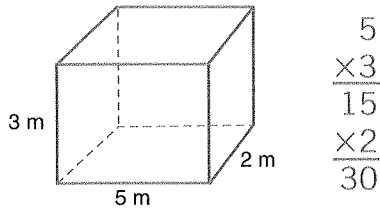
2.

3.

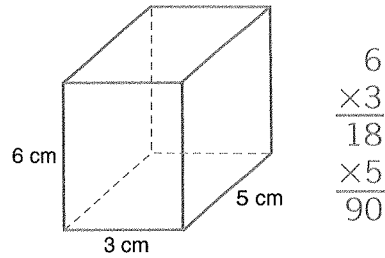
4.

5.

Lesson 4 Volume

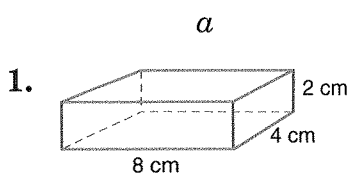


volume: 30 m³

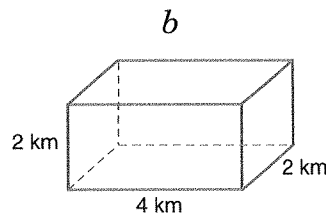


volume: 90 cm³

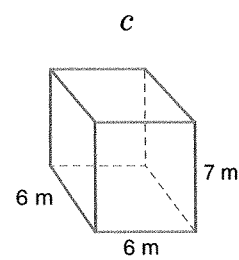
Find the volume of each rectangular solid.



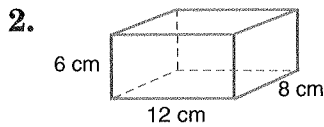
_____ cm³



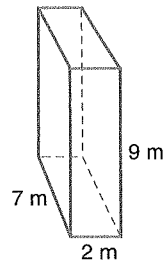
_____ km³



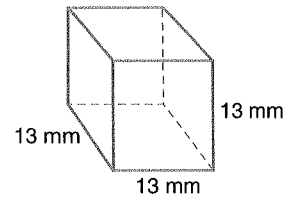
_____ m³



_____ cm³



_____ m³



_____ mm³

	<i>Length</i>	<i>Width</i>	<i>Height</i>	<i>Volume</i>
3.	4 km	8 km	3 km	_____ km ³
4.	7 cm	9 cm	11 cm	_____ cm ³
5.	8 m	15 m	5 m	_____ m ³
6.	18 m	12 m	10 m	_____ m ³
7.	10 mm	15 mm	6 mm	_____ mm ³

Lesson 4 Problem Solving

Solve each problem.

1. A box of crackers has a length of 18 cm, a width of 8 cm, and a height of 23 cm. What is the volume of the cracker box? **1.**

The volume of the cracker box is _____ cm^3 .

2. A swimming pool has a length of 5 m, a width of 3 m, and a depth of 1 m. What is the volume of the swimming pool? **2.**

The volume of the swimming pool is _____ m^3 .

3. The bed of a truck has a length of 3 m, a width of 2 m, and a height of 1 m. What is the volume of the bed of the truck? **3.**

The volume of the bed of the truck is _____ m^3 .

4. A fish aquarium has a length of 63 cm, a width of 30 cm, and a height of 28 cm. What is the volume of the aquarium? **4.**

The volume of the aquarium is _____ cm^3 .

5. A kitchen sink has a length of 38 cm, a width of 36 cm, and a height of 23 cm. What is the volume of the kitchen sink? **5.**

The volume of the kitchen sink is _____ cm^3 .

6. Find a cereal box that is a rectangular prism. Measure its length, width, and height. Find the volume of the cereal box. **6.**

length: _____

width: _____

height: _____

volume: _____

Lesson 5 Capacity

$$1 \text{ kL} = 1000 \text{ L}$$

$$1 \text{ L} = 1000 \text{ mL}$$

$6 \text{ L} = \underline{\quad ? \quad} \text{ mL}$

$1 \text{ L} = 1000 \text{ mL}$

$6 \text{ L} = (6 \times 1000) \text{ mL}$

$6 \text{ L} = \underline{6000} \text{ mL}$

$2 \text{ kL} = \underline{\quad ? \quad} \text{ L}$

$1 \text{ kL} = 1000 \text{ L}$

$2 \text{ kL} = (2 \times 1000) \text{ L}$

$2 \text{ kL} = \underline{\quad \quad \quad} \text{ L}$

Complete the following.

a

1. $8000 \text{ mL} = \underline{\quad \quad \quad} \text{ L}$

2. $8000 \text{ L} = \underline{\quad \quad \quad} \text{ kL}$

3. $16 \text{ L} = \underline{\quad \quad \quad} \text{ mL}$

4. $5 \text{ L} = \underline{\quad \quad \quad} \text{ mL}$

5. $15 \text{ kL} = \underline{\quad \quad \quad} \text{ L}$

b

5 L = $\underline{\quad \quad \quad} \text{ mL}$

16 000 L = $\underline{\quad \quad \quad} \text{ kL}$

3 L = $\underline{\quad \quad \quad} \text{ mL}$

6 kL = $\underline{\quad \quad \quad} \text{ L}$

7 L = $\underline{\quad \quad \quad} \text{ mL}$

6. Alex bought 6 L of milk. He is going to give 1 L of milk to each person. How many people can he serve?

He can serve $\underline{\quad \quad \quad}$ people.

7. Mindy bought 6000 mL of fruit juice. Sara bought 5 L of fruit juice. How many total litres of fruit juice did each person buy? Who bought more? How many litres more?

Mindy bought $\underline{\quad \quad \quad}$ L.

Sara bought $\underline{\quad \quad \quad}$ L.

$\underline{\quad \quad \quad}$ bought $\underline{\quad \quad \quad}$ L more.

6.

7.

Lesson 5 Problem Solving

Solve each problem.

1. A fruit-drink recipe calls for 4 L of water. How many millilitres of water is this? **1.**

It is _____ mL of water.

2. Ross counted 7 L of milk and 3000 mL of milk in the cooler. How many total litres of milk was this? How many total millilitres of milk was this? **2.**

It was _____ L of milk.

It was _____ mL of milk.

3. Bri has 12 L of juice. How many people can she serve at 200 mL per person? How many can she serve at 400 mL per person? **3.**

She can serve _____ people at 200 mL each.

She can serve _____ people at 400 mL each.

4. Gloria filled her pool with 8 kL of water. How many litres was that? **4.**

It was _____ L of water.

5. It took 15 L of tea to fill sixty china teacups. How many millilitres of tea is that? **5.**

It is _____ mL of tea.

6. Jamal poured 3 L of water and 1000 mL of cleaner into a bucket. How many litres is that? **6.**

It is _____ L of water and cleaner.

7. Rob needs 11 L of milk to make hot cocoa for his friends. How many millilitres of milk should he buy? **7.**

Rob should buy _____ mL of milk.

Lesson 6 Mass

$$1 \text{ kg} = 1000 \text{ g}$$

$$1 \text{ g} = 1000 \text{ mg}$$

$$3 \text{ kg} = \underline{\quad? \quad} \text{ g}$$

$$1 \text{ kg} = 1000 \text{ g}$$

$$3 \text{ kg} = (3 \times 1000) \text{ g}$$

$$3 \text{ kg} = \underline{3000} \text{ g}$$

$$2000 \text{ mg} = \underline{\quad? \quad} \text{ g}$$

$$1000 \text{ mg} = 1 \text{ g}$$

$$2000 \text{ mg} = (2000 \div 1000) \text{ g}$$

$$2000 \text{ mg} = \underline{\quad\quad\quad} 2 \text{ g}$$

Complete the following.

a

1. $5 \text{ kg} = \underline{\quad\quad\quad} \text{ g}$

2. $9000 \text{ g} = \underline{\quad\quad\quad} \text{ kg}$

3. $6 \text{ g} = \underline{\quad\quad\quad} \text{ mg}$

4. $5000 \text{ mg} = \underline{\quad\quad\quad} \text{ g}$

5. $6000 \text{ g} = \underline{\quad\quad\quad} \text{ kg}$

b

$16\,000 \text{ mg} = \underline{\quad\quad\quad} \text{ g}$

$3 \text{ kg} = \underline{\quad\quad\quad} \text{ g}$

$6 \text{ g} = \underline{\quad\quad\quad} \text{ mg}$

$5 \text{ kg} = \underline{\quad\quad\quad} \text{ g}$

$11 \text{ g} = \underline{\quad\quad\quad} \text{ mg}$

6. Anna's cat's mass is 4 kg. The cat's collar has a mass of 85 g. How many grams is the cat's mass when it is wearing its collar?

The cat's mass is $\underline{\quad\quad\quad}$ g with its collar.

7. Juyong took a 2-kg stack of letters to the post office. Each of the 20 letters had the same mass. How many grams was each letter's mass?

Each letter's mass was $\underline{\quad\quad\quad}$ g.

6.

7.

Lesson 6 Problem Solving

Solve each problem.

1. Lauren and John have 2 kg of hamburger. How many grams do they have? **1.**

They have _____ g.

2. How many 100-g hamburgers can be made from the meat in problem 1? **2.**

_____ 100-g hamburgers can be made.

3. How many 200-g hamburgers can be made from the meat in problem 1? **3.**

_____ 200-g hamburgers can be made.

4. How many 250-g hamburgers can be made from the meat in problem 1? **4.**

_____ 250-g hamburgers can be made.

5. The candy shop sells 100-g squares of fudge. Teresa buys 1 kg of fudge. How many squares of fudge does Teresa buy? **5.**

Teresa buys _____ squares of fudge.

6. Paul has 24 marbles in a bag. Each marble weighs 80 g. If he adds one more marble to his bag, how much will the bag's mass be in kilograms? **6.**

The bag's mass will be _____ kg.

7. Ramon wants to carry a backpack when he hikes. He has packed a 500 g bag of granola, a map that has a mass of 200 g, and some apples that has a mass of 500 g. How many grams of these supplies has Ramon packed in his backpack? **7.**

Ramon has packed _____ g in his backpack.

CHAPTER 9 PRACTICE TEST

More Metric Measurement

Complete the following.

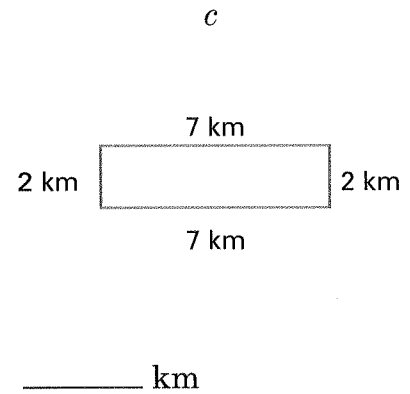
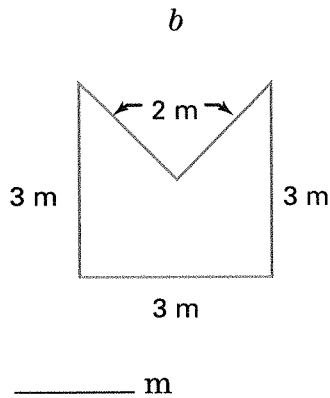
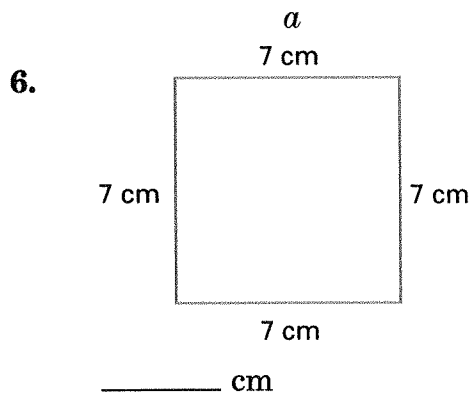
a

1. 7 L = _____ mL
2. 8000 mL = _____ L
3. 7000 L = _____ kL
4. 5 L = _____ mL
5. 7 L = _____ mL

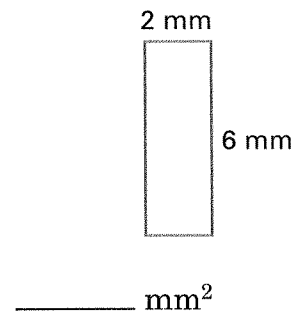
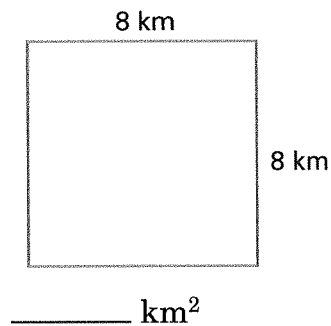
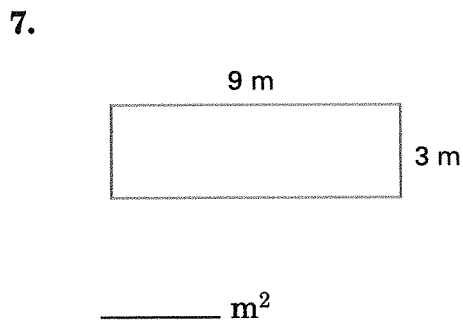
b

1. 9 m = _____ cm
- 300 cm = _____ m
- 10 km = _____ m
- 5 kL = _____ L
- 6 L = _____ mL

Find the perimeter of each figure below.



Find the area of each rectangle below.



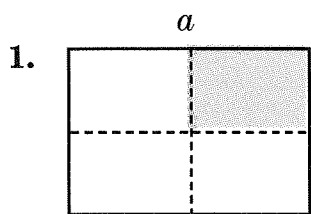
Find the volume.

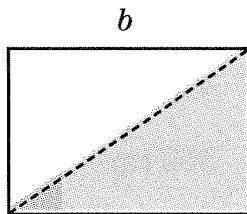
	<i>Length</i>	<i>Width</i>	<i>Height</i>	<i>Volume</i>
8.	16 cm	4 cm	9 cm	_____ cm ³
9.	11 m	26 m	3 m	_____ m ³

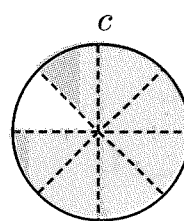
CHAPTER 10 PRETEST

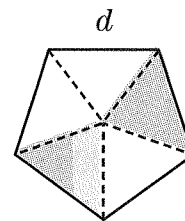
Fractions

Write the fraction that tells how much of each figure is coloured.









Change each fraction to simplest form.

2. $\frac{4}{6}$

$\frac{8}{16}$

$\frac{15}{20}$

Rename as mixed numerals.

3. $\frac{7}{6}$

$\frac{8}{3}$

$\frac{17}{5}$

Change each mixed numeral to an improper fraction.

4. $3\frac{1}{4}$

$6\frac{1}{2}$

$3\frac{5}{6}$

Change each of the following to simplest form.

5. $1\frac{6}{8}$

$\frac{10}{3}$

$4\frac{5}{2}$