

## Grade 6 Measurement

### Lesson 6-1: Time Zones

Use the time zone maps in Lesson 1.

1. It is 3:00 p.m. in Calgary, Alberta. It is Canada Day.  
What time is it in each city?
  - a) Hamilton, Ontario
  - b) Sydney, Nova Scotia
  - c) Whitehorse, Yukon
2. It is 11:00 p.m. in Winnipeg, Manitoba. It is November 1st.  
What time is it in each city?
  - a) Charlottetown, Prince Edward Island
  - b) St. John, New Brunswick
  - c) Laval, Quebec

### Lesson 6-2: The 24-Hour Clock

1.
  - a) A train leaves London, Ontario, at 09:30 and arrives in Quebec City, Quebec, at 23:15. How long is the trip?
  - b) A plane departs at 22:45 and lands at 08:10. How long is the flight?
2. The table shows a flight schedule.  
Fill in the missing times.

| Departure | Arrival | Flying Time |
|-----------|---------|-------------|
| 06:25     | 13:40   |             |
| 11:30     |         | 6 h 48 min  |
| 16:08     |         | 4 h 27 min  |
|           | 18:52   | 9 h 20 min  |
|           | 02:35   | 3 h 42 min  |

### Lesson 6-3: Money to \$10 000

1. Estimate each sum or difference.

Show your work.

a)  $\begin{array}{r} \$4491.50 \\ + \$1628.85 \\ \hline \end{array}$

b)  $\begin{array}{r} \$6231.25 \\ - \$3214.68 \\ \hline \end{array}$

c)  $\begin{array}{r} \$3452.49 \\ + \$5483.38 \\ \hline \end{array}$

2. This is Taylor's bank account statement for February.  
She started with a balance of \$9278.46.

| Date    | Description             | Withdrawal | Deposits  |
|---------|-------------------------|------------|-----------|
| Feb. 3  | Car payment             | \$620.60   |           |
| Feb. 7  | Credit card bill        | \$489.22   |           |
| Feb. 12 | Paycheque               |            | \$1674.32 |
| Feb. 12 | Hydro bill              | \$264.81   |           |
| Feb. 19 | Theatre tickets         | \$147.68   |           |
| Feb. 22 | Cheque from Aunt Marion |            | \$50.00   |
| Feb. 26 | Paycheque               |            | \$1674.32 |

What is the balance at the end of the month? Show your work.

### Lesson 6-5: Surface Area of a Rectangular Prism

1. Find the surface area of a rectangular prism with each set of dimensions.

a) length 12 cm, width 5 cm, height 4 cm

b) length 21 cm, width 10 cm, height 15 cm

c) length 8.0 m, width 2.1 m, height 3.9 m

2. A piece of wrapping paper is 1 m by 1 m.

Raymond needs to wrap a box with dimensions

40 cm by 35 cm by 45 cm.

Does Raymond have enough paper to wrap the box? Explain.

### Lesson 6-6: Volume of a Rectangular Prism

1. Find the volume of a rectangular prism with each set of dimensions.
  - a) length 15 cm, width 4 cm, height 9 cm
  - b) length 23 m, width 18 m, height 31 m
  - c) length 33 cm, width 10.5 cm, height 55 cm
2. How many different rectangular prisms can you make with volume  $27 \text{ cm}^3$ ?  
Each prism must have whole-number dimensions.  
Sketch and label each prism you find.

### Lesson 6-7: The Cubic Metre

1. Suggest an appropriate unit to measure each item.
  - a) the area of a rug
  - b) the space in a refrigerator
  - c) a marathon route
2. A box has length 0.5 m, width 1.5 m, and height 2 m.  
Is the volume of the box less than, greater than, or equal to  $1\,000\,000 \text{ cm}^3$ ?  
Explain how you know.

### Lesson 6-8: Capacity and Volume

1. Copy and complete.

|  |  |
|--|--|
| a) $3600 \text{ mL} = \square \text{ L}$   | b) $9.9 \text{ L} = \square \text{ mL}$          |
| c) $7 \text{ m}^3 = \square \text{ cm}^3$  | d) $650\,000 \text{ cm}^3 = \square \text{ m}^3$ |
| e) $120 \text{ mL} = \square \text{ cm}^3$ | f) $7720 \text{ L} = \square \text{ m}^3$        |
2. A lawn mower needs 250 mL of oil for every 8 L of gasoline.  
When 1 L of oil is used, how much gasoline is needed?

### Lesson 6-9: Relating Units of Mass

1. Convert 65 t to kilograms and grams.

2. Copy and complete.

a)  $4290 \text{ g} = \square \text{ kg}$

b)  $21 \text{ kg} = \square \text{ t}$

c)  $1.952 \text{ t} = \square \text{ kg}$

d)  $5002 \text{ kg} = \square \text{ g}$

e)  $9834 \text{ mg} = \square \text{ g}$

f)  $5.91 \text{ g} = \square \text{ mg}$

3. Write each mass using two different units.

a) 7.6 kg

b) 125 g

c) 912 000 mg

d) 8.4 t