

Name : Answer Key Date: \_\_\_\_\_

## Module 2 study guide

### 1. COMPLETE THE FOLLOWING CONVERSION CHARTS

#### LENGTH

|                           |                  |
|---------------------------|------------------|
| 9 km                      | <u>9,000</u> m   |
| <u>18</u> km              | 18,000m          |
| 9 km 26 m                 | <u>9,026</u> m   |
| <u>26</u> Km <u>675</u> m | 23,675m          |
| 35 km 22 m                | <u>35,022</u> m  |
| 202 km 1 m                | <u>202,001</u> m |

#### MASS

|                            |                 |
|----------------------------|-----------------|
| 25 kg                      | <u>25,000</u> g |
| <u>202</u> kg              | 202,000 g       |
| 16 kg 2 g                  | <u>16,002</u> g |
| 35 kg 10 g                 | <u>35,010</u> g |
| <u>435</u> Kg <u>23</u> g  | 435,023 g       |
| <u>398</u> Kg <u>132</u> g | 398, 132 g      |

#### CAPACITY

|                           |                  |
|---------------------------|------------------|
| 2 L                       | <u>2,000</u> ml  |
| <u>3</u> L                | 3000ml           |
| 25 L 254 ml               | <u>25,254</u> ml |
| <u>35</u> L <u>964</u> ml | 35,964 ml        |
| <u>987</u> L <u>1</u> ml  | 987,001 ml       |

2. Find the sum or difference. Show your work.

a.  $562\text{ kg } 43\text{ g} - 24\text{ kg } 27\text{ g} =$

$$\begin{array}{r} \phantom{5} \overset{5}{12} \phantom{0} \overset{3}{13} \\ 562,043\text{ g} \\ - 24,027\text{ g} \\ \hline 538,016\text{ g} \end{array}$$

B.  $25\text{ L } 7\text{ ml} + 189\text{ ml} =$

$$\begin{array}{r} 25,007\text{ mL} \\ + 189\text{ mL} \\ \hline 25,196\text{ mL} \end{array}$$

C.  $345\text{ kg } 678\text{ g} + 123\text{ kg } 456\text{ g} =$

$$\begin{array}{r} 345,678\text{ g} \\ + 123,456\text{ g} \\ \hline 469,134\text{ g} \end{array}$$

D.  $432\text{ km } 22\text{ m} - 89\text{ km } 15\text{ m} =$

$$\begin{array}{r} 3 \overset{12}{12} \phantom{0} \overset{13}{13} \\ 432,022\text{ m} \\ - 89,015\text{ m} \\ \hline 343,007\text{ m} \end{array}$$

E.  $254\text{ kg} - 267\text{ g} =$

$$\begin{array}{r} \phantom{2} \overset{9}{9} \phantom{0} \overset{10}{10} \\ 254,000\text{ g} \\ - 267\text{ g} \\ \hline 253,733\text{ g} \end{array}$$

3. Mrs. Ashby walks her pet alligator for 12,000m every day. Then, she walks her pet elephant for 2 km. How many meters does Mrs. Ashby walk her pets each day?

Alligator = 12,000m

Elephant = 2 km  $\rightarrow$  2,000m

$$\begin{array}{r} 12,000\text{m} \\ + 2,000\text{m} \\ \hline \end{array}$$

14,000m or 14 km Mrs. Ashby walks her pets each day.

4. Mrs. Raines drinks coffee every day. She wants to take coffee with her to the zoo field trip. Each morning she drinks 32,000 ml of coffee. In the afternoon, she drinks 55,000 ml of coffee. Would all of her coffee fit into a 2L container to bring to the zoo? Explain your thinking.

Morning = 32,000 mL of coffee

Afternoon = ~~55,000~~ 55,000 mL of coffee

Container = Fits 2L or 2,000mL

$$\begin{array}{r} 55,000\text{ mL} \\ + 32,000\text{ mL} \\ \hline \end{array}$$

87,000 mL of coffee Mrs. Raines drinks total, so that amount will not fit into a 2L/2,000 mL container. The answer is no!

5. Emma and Morgan are arguing about who has run the most at practice this week. If Emma ran 25 km, and Morgan ran 21,535 m, who ran the most? And how much more did she run?

Emma = 25 km or 25,000m

Morgan = 21,535 m

$$\begin{array}{r}
 4 \text{ } 10 \text{ } 10 \text{ } 10 \\
 25,000 \text{ m} \\
 - 21,535 \text{ m} \\
 \hline
 3,465 \text{ m}
 \end{array}$$

Emma ran the most.  
She ran 3,465m more than Morgan.

6. Mr. Wolfe has been training for his bike race and has been losing some weight. Two weeks ago he lost 1 kilogram 235 grams. Last week and this week he has lost 2 kilograms 145 grams. Mr. Wolfe now weighs 82 kilograms 325 grams. What was his weight in grams, before he started training? Explain your thinking.

2 weeks ago = lost 1kg 235g → 1,235g

Last week = lost 2 kg 145g → 2,145g

This week = lost 2 kg 145g → 2,145g

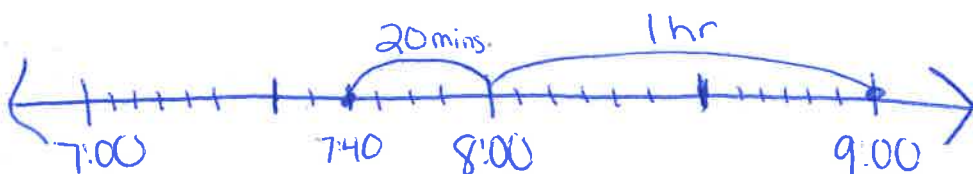
Add these together  
= 5,525g  
weight lost total

Now weighs = 82 kg 325g → 82,325g

$$\begin{array}{r}
 82,325 \text{ g} \\
 + 5,525 \text{ g} \\
 \hline
 87,850 \text{ g}
 \end{array}$$

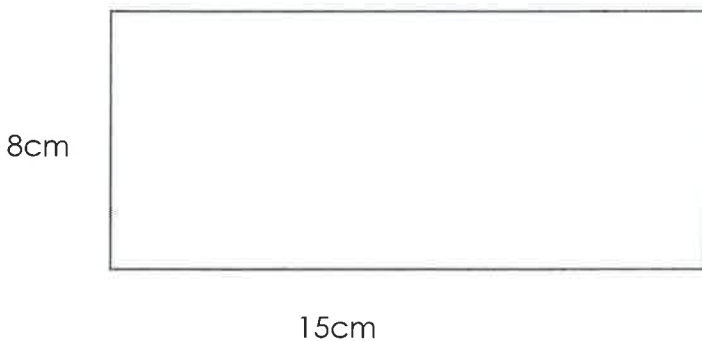
Mr. Wolfe's weight was 87,850g before he started training.

7. Luke gets home from football practice at 7:40. He needs to go to bed by 9:00. How much time does Luke have after practice before he needs to go to bed?



Luke will have 1 hour and 20 minutes before he goes to bed.

8. Find the area and perimeter of the rectangle below.



$$\text{Area} = L \times W$$

$$\begin{array}{r} 15 \\ \times 8 \\ \hline 120 \end{array}$$

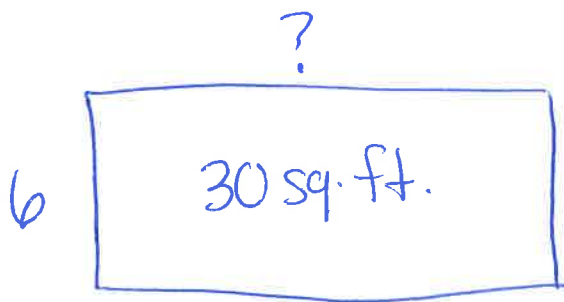
$$P = L + W + L + W$$

$$15 + 8 + 15 + 8$$
$$\underbrace{\quad\quad}_{23} + \underbrace{\quad\quad}_{23} = 46$$

Area: 120

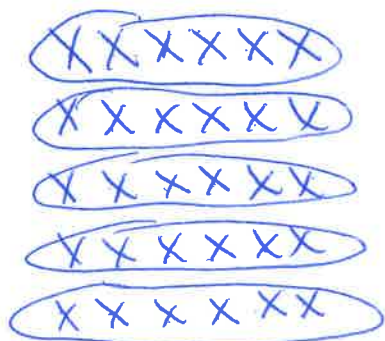
Perimeter: 46

9. Last weekend, Mr. Wolfe went camping and slept in a tent. The width of the tent was 6 feet and the area of the tent was 30 square feet. What was the length of the tent?



The length is 5 feet.

$$30 \div 6 = \underline{5} \quad \text{or} \quad 6 \times \underline{5} = 30 \quad \text{or}$$



5 groups of 6

