

## Year 4 Term 3 Homework

<b>Student Name:</b> _____	<b>Grade:</b> _____
<b>Date:</b> _____	<b>Score:</b> _____

### Table of contents

<b>4 Year 4 Term 3 Week 4 Homework</b>	<b>1</b>
4.1 Topic 1 — Volume . . . . .	1
4.2 Topic 2 — Mass . . . . .	2
4.3 Topic 3 — Temperature . . . . .	3
4.4 Topic 4 — Time . . . . .	5
4.5 Problem Solving (Using Tables) . . . . .	7
4.6 Quiz 4 . . . . .	9
4.6.1 Part A . . . . .	9
4.6.2 Part B . . . . .	10
4.6.3 Part C . . . . .	12
4.6.4 Part D . . . . .	14

This edition was printed on June 8, 2017 with **answers**.

Camera ready copy was prepared with the **L<sup>A</sup>T<sub>E</sub>X<sub>2</sub> $\epsilon$**  typesetting system.

Copyright © 2000 - 2017 Yimin Math Centre ([www.yiminmathcentre.com](http://www.yiminmathcentre.com))

## 4 Year 4 Term 3 Week 4 Homework

### 4.1 Topic 1 — Volume

1. Change the units in brackets:

(a) 2.02 Litres = \_\_\_\_\_ ( $cm^3$ ).

(b) 202  $cm^3$  = \_\_\_\_\_ (Litres).

(c) 2.02  $m^3$  \_\_\_\_\_ (Litres).

(d) 202 mL = \_\_\_\_\_ ( $cm^3$ ).

(e) 202 mL \_\_\_\_\_ (Litres).

2. The volume of a cube is 512  $cm^3$ . What is the surface area of the cube?

---

---

3. A water tank 5 m by 3.4 m by 2.8 m is  $\frac{2}{5}$  filled with water. How much more water can the tank hold?

---

---

---

4. Bonnie bought six 2.5 L packets of fresh milk. She poured all the milk into 150 mL cups. How many 150 mL cups would she need to hold the milk?

---

---

---

5. A rectangular tank measured 27 cm by 15 cm by 8 cm is  $\frac{5}{8}$  filled with sand. Find the volume of the sand.

---

---

---

## 4.2 Topic 2 — Mass

1. Change the units in brackets:

(a)  $12.50 \text{ g} = \text{_____} \text{ (kg)}$ .

(b)  $4.05 \text{ t} = \text{_____} \text{ (kg)}$ .

(c)  $1.025 \text{ kg} = \text{_____} \text{ (g)}$ .

(d)  $0.025 \text{ kg} = \text{_____} \text{ (g)}$ .

(e)  $1250 \text{ mL water} = \text{_____} \text{ (g)}$ .

(f)  $0.45 \text{ of } 4 \text{ kg} = \text{_____} \text{ (g)}$ .

(g)  $15\% \text{ of } 1.5 \text{ t} = \text{_____} \text{ (kg)}$ .

(h)  $\frac{3}{8} \text{ kg} = \text{_____} \text{ (g)}$ .

(i)  $0.14 \text{ t} = \text{_____} \text{ (g)}$ .

(j)  $\frac{3}{4} \text{ of } 2.5 \text{ kg} = \text{_____} \text{ (g)}$ .

2. Express 0.9 kg as a ratio of 90 g. \_\_\_\_\_

3. Express 132.75 kg in grams . \_\_\_\_\_

4. Express 294 g as a fraction of 2 kg in its simplest form. \_\_\_\_\_

5. 79.89 kg correct to the nearest kg is \_\_\_\_\_

6. The average weight of 6 girls is 47 kg. If one of them weighs 52 kg, what is the average weight of the other 5 girls?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

7. A box containing biscuits has a mass of 600 g. The mass of the packaging is 53 g. What is the total mass of the biscuits in 12 boxes?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### 4.3 Topic 3 — Temperature

1. True or false

(a) When it snows, the temperature is about  $8^{\circ}\text{C}$ . \_\_\_\_\_

(b)  $500^{\circ}\text{C}$  is a good temperature to bake a cake. \_\_\_\_\_

(c) The Celsius temperature scale has been designed so that water freezes at  $0^{\circ}\text{C}$ . \_\_\_\_\_

(d) The Lowest possible temperature is  $-273^{\circ}\text{C}$ . \_\_\_\_\_

(e) On a day when the air temperature is  $23^{\circ}\text{C}$  we would feel cool. \_\_\_\_\_

(f)  $-8^{\circ}\text{C}$  is colder than  $-12^{\circ}\text{C}$ . \_\_\_\_\_

2. The temperature inside the office is  $21^{\circ}\text{C}$  and outside is  $32^{\circ}\text{C}$ . What is the difference in temperature?

---

---

3. The temperature inside the house is  $15^{\circ}\text{C}$  but outside is  $-4^{\circ}\text{C}$ . What is the difference in temperature?

---

---

4. If the midday temperatures for last week were  $21^{\circ}\text{C}$ ,  $17^{\circ}\text{C}$ ,  $18^{\circ}\text{C}$ ,  $20^{\circ}\text{C}$ ,  $19^{\circ}\text{C}$ ,  $18^{\circ}\text{C}$  and  $20^{\circ}\text{C}$ . What was the average temperature for these days?

---

---

5. Today's temperature is  $21^{\circ}\text{C}$ . Tomorrow it is going to be  $9^{\circ}\text{C}$  higher. What will be the temperature tomorrow?

---

---

6. A student wants to raise the temperature of a liquid from  $25^{\circ}\text{C}$  to  $112^{\circ}\text{C}$  in the lab. By how much must he raise it?

---

---

#### 4.4 Topic 4 — Time

1. Change the units in brackets:

(a) 1.4 hours = \_\_\_\_\_ (seconds) .

(b)  $2\frac{2}{3}$  hours = \_\_\_\_\_ (minutes) .

(c) 2 fortnights = \_\_\_\_\_ (days) .

(d) 15 minutes = \_\_\_\_\_ (seconds).

(e) 1 leap year = \_\_\_\_\_ (days) .

(f) 150 minutes = \_\_\_\_\_ (hours) .

(g) 3 decades = \_\_\_\_\_ (years) .

(h) 1 week = \_\_\_\_\_ (hours) .

(i) 3 years = \_\_\_\_\_ (weeks) .

(j) 2 centuries = \_\_\_\_\_ (years) .

2. How many hours are there from Monday 6 a.m. to 7p.m. the same day?

\_\_\_\_\_

3. How many hours and minutes are there from 8.30 a.m. to 6.25 p.m the same day?

\_\_\_\_\_

4. From 14 h 25 min take away 3 h 36 min.

\_\_\_\_\_

\_\_\_\_\_

5. How many minutes are there from Friday noon to 8 p.m. the same day?

\_\_\_\_\_

\_\_\_\_\_

6. Adam sets the alarm clock for 6.30 a.m. At what time he must go to bed to have 8 hours of sleep?

\_\_\_\_\_

\_\_\_\_\_

## 4.5 Problem Solving (Using Tables)

**Example 4.5.1** Mike has \$5 more than Tony and \$10 more than Keith. together, the three have \$81. How much does Mike have?

**Solution:**

First construct a table and start with Mike has \$20, \$30, \$31 and \$32 until we have the sum of \$81.

Mike	Tony	Keith	SUM
\$20	\$15	\$10	\$45
\$30	\$25	\$20	\$75
\$31	\$26	\$21	\$78
<b>\$32</b>	<b>\$27</b>	<b>\$22</b>	<b>\$81</b>

Therefore Mike has \$32 .

### Exercise 4.5.1

1. Jessica, her brother Ray and her mother Cathy, together weigh 104 kg. If Cathy weighs twice as much as Jessica and her brother weighs 12 kg more than Jessica. How much does Jessica weigh?

---



---



---

2. An equilateral triangle and a square have the same perimeter. The sides of the triangle are 8 cm longer than the sides of the square. What is the perimeter?

---



---



---

3. In how many ways you can change a \$1 coin in to 50c, 20c and 10c coins? Illustrate this in a table.

---



---



---

## 4.6 Quiz 4

### 4.6.1 Part A

- What number do these Roman Numerals represent?
  - CCCXL \_\_\_\_\_ .
  - MDLIV \_\_\_\_\_ .
  - CDXCIX \_\_\_\_\_ .
  - CMLXII \_\_\_\_\_ .
  - DLVIII \_\_\_\_\_ .
- Evaluate  $20 + 5 \times 3 - 4 \times 2 =$  \_\_\_\_\_
- Evaluate  $2.5 \times 6 - 1.2 \times 3 =$  \_\_\_\_\_
- Evaluate  $12 \div 4 \times 3 + 6 =$  \_\_\_\_\_
- One quarter of one million is \_\_\_\_\_ .
- The next prime number after 23 is \_\_\_\_\_ .
- The difference between the number of faces and the number of edges of a pentagonal prism is:  
\_\_\_\_\_
- Which of the following numbers when rounded off to nearest thousand gives 460,000?
  - 458,990
  - 459,459
  - 458,505
  - 460,491
- Which regular 2D shape has more than one right angle?
  - a rhombus,
  - a rectangle,
  - a hexagon,
  - a kite
- The ratio 112 : 42 in its simplest form is \_\_\_\_\_ .
- $9.25 \text{ km} - 1575 \text{ m} =$  \_\_\_\_\_ m .
- How many tens are in a million? \_\_\_\_\_
- What should be added to the sum of 69010 and 7534 to make it 82000? \_\_\_\_\_
- 6 hundreds, 5 tenths and 17 thousandths written as a decimal is \_\_\_\_\_ .

**4.6.2 Part B**

1. The product of three numbers is 1365. Two of them are 13 and 15. What is the third number?

---

---

---

2. Which is the larger 15% of 100 or 100% of 15?

- (a) 15% of 100    (b) 100% of 15    (c) they are equal    (d) none of them is correct

3. If a discount of 25% is given on an item selling for \$75, What is actually paid for the item?

---

---

---

4. The time from 6.38 a.m. to 4.23 p.m the same day is?

---

---

---

5. The difference between \$1000 dollars and 1000 cents is?

---

---

---

6. There are seven teams in a cricket competition and each team plays each other team once. How many games are played altogether?

---

---

---

7. How many times does the hour hand of a clock rotate in the month of December?

---

---

---



**4.6.3 Part C**

1. In a certain year December 25 is a Tuesday. What day is the 7th in the same month?

---

---

2. At an average speed of 60 km/h a car takes  $1\frac{1}{2}$  hours to travel a certain distance. How long will it take if the car is travelling at an average speed of 80 km/h?

---

---

3. A water tank when half full holds 96 litres. How much more water is needed to make it two-thirds full?

---

---

---

4. A girl types 28 words every 30 seconds. How many words has she typed in  $1\frac{1}{2}$  hours?

---

---

---

5. A petrol tank which can hold 62 L is  $\frac{3}{4}$  full. If half of the petrol is used, how many litres are left?

---

---

---

6. John wishes to buy a laptop priced at \$1582.50. He pays one-fifth in cash and the rest in 12 equal monthly payments. How much must he pay each month?

---

---

---

**4.6.4 Part D**

1. The average of five numbers is 8. If one of the five numbers is removed, the new average of the remaining numbers is 9. What is the value of the number that was removed?

---

---

---

---

---

2. The product of two numbers is 144 and their quotient is 4. What are the numbers?

---

---

---

---

---

3. Find the smallest of four consecutive numbers whose sum is 98.

---

---

---

---

---

4. Ken spent 0.5 of his money on Friday, 0.3 of it on Saturday and \$65 on Sunday. He had \$45 left after that. How much did he spend on the weekend?

---

---

---

---

---