

## Year 5 Term 1 Homework

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

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## 2 Year 5 Term 1 Week 2 Homework

### 2.1 Topic 1 — Roman Numerals

1. Write the following in Roman numerals:

(a) 114 = \_\_\_\_\_

(b) 247 = \_\_\_\_\_

(c) 395 = \_\_\_\_\_

(d) 1999 = \_\_\_\_\_

(e) 5099 = \_\_\_\_\_

2. Write the following in our own numerals:

(a) CXXXIV = \_\_\_\_\_

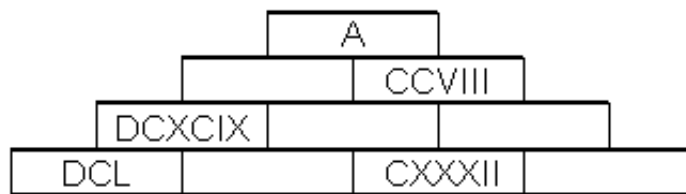
(b) MDCX \_\_\_\_\_

(c) CDLIX \_\_\_\_\_

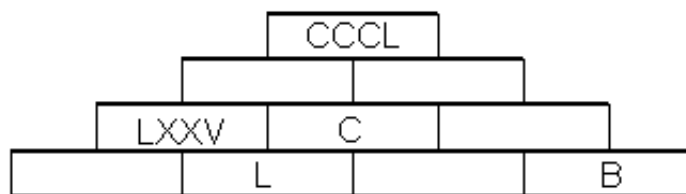
(d) MCMLXX \_\_\_\_\_

(e) CXCIV \_\_\_\_\_

3. The sum of any adjacent numbers is the number directly above them. Find the value of the box "A".



4. The sum of any adjacent numbers is the number directly above them. Find the value of the box "B".



**2.2 Topic 2 — Place Value**

1. Write the basic numeral for:

(a)  $3 \times 10^3 + 2 \times 1 =$  \_\_\_\_\_

(b)  $4 \times 10^4 + 7 \times 10^3 + 3 \times 10 + 5 \times 1 =$  \_\_\_\_\_

(c)  $5 \times 10^4 + 2 \times 10^2 + 3 \times 10 + 9 \times 1 =$  \_\_\_\_\_

(d)  $6 \times 10^6 + 4 \times 10^4 + 2 \times 10^2 + 1 \times 1 =$  \_\_\_\_\_

2. Use the quick method to find:

(a)  $25 \times 1234 \times 4 =$  \_\_\_\_\_

(b)  $14 \times 16 - 8 \times 14 - 7 \times 14 =$  \_\_\_\_\_

(c)  $553 + 437 + 282 - 253 - 137 + 18 =$  \_\_\_\_\_

(d)  $124 \div 12 + 56 \div 12 =$  \_\_\_\_\_

3. Write the basic numeral for  $(5 \times 1000) + (6 \times 100) + (3 \times 10) + 9 =$  \_\_\_\_\_

4. How many tens are there in 6752? \_\_\_\_\_

5. Write the number that is one hundred more than one hundred thousand. \_\_\_\_\_

6. Write the difference between the place value and the face value of the 7 in 7438. \_\_\_\_\_

7. Make the largest possible number with the following digits 3, 5, 7, 9, 0. \_\_\_\_\_

8. 99 less than 99,999 is \_\_\_\_\_

9. 199 more than 12345 is \_\_\_\_\_

10. If  $125 \times 8 = 1000$ ,  $8000 \times 125 =$  \_\_\_\_\_

11.  $9^2 - 6^2 - 3^2 =$  \_\_\_\_\_

12. Write in figures the number ten thousand greater than one million. \_\_\_\_\_

13. What number is 18 less than 9000? \_\_\_\_\_

14. How many whole hundreds are there in 345,987? \_\_\_\_\_

## 2.3 Topic 3 — Rounding Off

**Exercise 2.3.1** Write the next smaller and greater whole tens, hundreds and thousands in the table below:

4000	<	4200	<	4260	<	<b>4263</b>	<	4270	<	4300	<	5000
	<		<		<	<b>6728</b>	<		<		<	
	<		=		<	<b>9806</b>	<		<		<	
	<		<		<	<b>7777</b>	<		<		<	
	<		<		<	<b>2222</b>	<		<		<	

## 2.4 Topic 4 — Order of Operations

Mathematicians around the world have agreed on a definite order of doing brackets and the 4 operations (+, −, ×, ÷), otherwise confusion would occur.

For example, which is the correct answer?

$$6 + 2 \times 4 = 14 \quad \text{OR} \quad 6 + 2 \times 4 = 32$$

### THE AGREED ORDER OF OPERATIONS

1. Firstly, work out the answer to the brackets in the order of ( ), [ ] and { }.
2. Secondly, work out any division and multiplication as they occur from left to right.
3. Thirdly, work out any addition and subtraction as they occur from left to right.

This is often remembered by students as:

**B            O   D            M            A            S**  
**Brackets   Of   Division   Multiplication   Addition   Subtraction**

### Example 2.4.1

**Solution:**

$$\begin{aligned} & \{[(12 + 6) \div (12 - 9)] \times [(12 - 6) \times 2]\} && ( ) \text{ brackets first} \\ = & \{[18 \div 3] \times [6 \times 2]\} && [ ] \text{ brackets second} \\ = & \{6 \times 12\} && \{ \} \text{ brackets last.} \\ = & 72 \end{aligned}$$

1. Find the basic numeral for each the following:

(a)  $[(24 + 25) \div 7] \times 8 =$  \_\_\_\_\_

(b)  $[9 + (9 \times 9)] \div 9 =$  \_\_\_\_\_

(c)  $\{[(150 \div 15) - 7] - 2\} =$  \_\_\_\_\_

(d)  $[(10 \times 8) - 36] \div 11 =$  \_\_\_\_\_

(e)  $5 \times [(4 + 7) \times (3 \times 6)] =$  \_\_\_\_\_

2. Insert the grouping symbols to make the following statements true:

(a)  $15 - 7 \times 9 = 72$  \_\_\_\_\_

(b)  $24 + 12 \div 4 + 5 = 4$  \_\_\_\_\_

(c)  $14 + 8 - 6 \times 3 = 20$  \_\_\_\_\_

(d)  $72 \div 12 - 3 + 2 = 10$  \_\_\_\_\_

(e)  $144 \div 12 - 7 \times 3 = 15$  \_\_\_\_\_

3.  $12 \times 8 + 4 = 6 \times \boxed{X} - 2$ . Find the missing number in the box. \_\_\_\_\_

4.  $24$  \_\_\_\_\_  $8$  \_\_\_\_\_  $5 = 8$ . The missing signs are:

(a)  $+$  and  $\div$

(b)  $\div$  and  $+$

(c)  $-$  and  $\div$

(d)  $\div$  and  $-$

5. Which statement is true?

(a)  $23 \times 12 > 230 + 120$  (b)  $256 \div 4 = 46 + 8$  (c)  $125 + 512 = 700 - 63$  (d)  $392 - 26 > 61 \times 6$

**Example 2.4.2 A quick way of finding the sum of odd numbers:**

- Write the even number after the last odd number.
- halve it.
- Square the result.

*i.e. Find the sum of  $1 + 3 + 5 + \dots + 15$ .*

- step 1 The even number after 15 is 16.
- $16 \div 2 = 8$
- $8^2 = 64$                       thus the sum is 64.

## 2.5 Problem Solving (Consecutive Numbers)

### Example 2.5.1

- *Consecutive numbers are numbers that follow in order, such as 1, 2, 3, 4, . . .*
- *Consecutive even numbers are even numbers that follow in order, such as 2, 4, 6, 8, . . .*
- *Consecutive odd numbers are odd numbers that follow in order, such as 1, 3, 5, 7, 9, . . .*
- *3, 6, 9 are not consecutive numbers, but are consecutive multiples of 3.*

1. What kind of consecutive numbers are in each case below:

- (a) Three numbers whose sum is 48. \_\_\_\_\_
- (b) Three numbers whose product is 48. \_\_\_\_\_
- (c) Three even numbers whose sum is 72. \_\_\_\_\_
- (d) Three odd numbers whose sum is 105. \_\_\_\_\_

2. Consider three consecutive numbers. Work out the square of the middle number minus the product of the other two numbers. What result do you find (Try this with a few numbers)?

- (a) Three consecutive numbers such as 3, 4 and 5.

\_\_\_\_\_

\_\_\_\_\_

- (b) Three consecutive odd numbers, such as 5, 7 and 9.

\_\_\_\_\_

\_\_\_\_\_

- (c) Three consecutive even numbers, such as 4, 6 and 8.

\_\_\_\_\_

\_\_\_\_\_

3. Use two different methods to find the sum of odd numbers from 1 to 49.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## 2.6 Test Paper 2

### 2.6.1 Part A — Quick Questions

1. 100 more than 10 000 = \_\_\_\_\_
2. The value of 7 in 874 is \_\_\_\_\_
3. Write our numeral for XLVI. \_\_\_\_\_
4.  $9^2 - 3^2 =$  \_\_\_\_\_
5.  $\frac{1}{3} \times 900 < 299$ . True or False? \_\_\_\_\_
6.  $90\,000 + 900 + 9 =$  \_\_\_\_\_
7. Roman numeral for 93 = \_\_\_\_\_
8.  $6 \times 10^4 =$  \_\_\_\_\_
9. 1000 more than 53 680 = \_\_\_\_\_
10.  $38\,769 > 38\,796$ . True or False? \_\_\_\_\_
11.  $90 \times 90$  \_\_\_\_\_
12. Take 0.3 from 0.63 \_\_\_\_\_
13. Write in figures one million. \_\_\_\_\_
14. Find the sum of 66 ¢ and \$0.72. \_\_\_\_\_
15. Find  $50c \times 40 =$  \_\_\_\_\_
16. How many halves in 4? \_\_\_\_\_
17. What number is 7 less than 7000? \_\_\_\_\_
18. A child was born in 1972. How old is he in 1996? \_\_\_\_\_
19. What is the size of the angle between North and East? \_\_\_\_\_
20. How many days altogether in July and August? \_\_\_\_\_

**2.6.2 Part B — Average Questions**

1. 1 million less than 30 478 920. \_\_\_\_\_

2. 10 thousand more than 1 598 600. \_\_\_\_\_

3.  $90.2 \times \square = 902000$  \_\_\_\_\_

4.  $\square \times 1000 = 31.5$  \_\_\_\_\_

5. 0, 3, 5 and 8 are 4 cards to be arranged in 4 digit numbers.

(a) What is the biggest odd number? \_\_\_\_\_

(b) What is the smallest even number? \_\_\_\_\_

6. Place the following numbers in descending order.

(a) 0.83 , 8.03 , 0.08 , 8.003 , 0.083 , 0.803 \_\_\_\_\_

(b)  $\frac{2}{3}$ ,  $\frac{3}{4}$ , 0.7,  $\frac{69}{100}$  \_\_\_\_\_

7. Round of 578.761 to the nearest whole number. \_\_\_\_\_

8. Round off \$3.476 to the nearest cent. \_\_\_\_\_

9.  $(\frac{1}{3})^2 + (\frac{1}{2})^2 =$  \_\_\_\_\_

10.  $2^0 + 2^1 + 2^2 + 2^3 =$  \_\_\_\_\_

11.  $\sqrt{196} - \sqrt{81}$  \_\_\_\_\_

12. What is the square root of the sum of the squares of 12 and 5? \_\_\_\_\_

13.  $42 - 16 \div 4 + 7 =$  \_\_\_\_\_

14.  $51 - (28 + 12 \div 4) =$  \_\_\_\_\_

15.  $162 \div 9 \times 3 - 42 \div 6 + 11 =$  \_\_\_\_\_

16. Use the following operation signs and numbers to make an expression.

(a)  $\times, +, (), 7, 8, 9 = 128$  \_\_\_\_\_

(b)  $\div, -, (), 15, 11, 8 = 5$  \_\_\_\_\_



**2.6.3 Part C — Extension Questions**

1. Find the average mark.

Mark	3	4	5	6	7	8	9	10
No. of student	2	3	4	8	10	5	2	1

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2. What number is five times the square root of 81 is increased by the quotient of 24 and 6.

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3. The difference between 39 and 11 is divided by the sum of 2 squared and 3.

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4.  $0.5 + 2\frac{1}{2} - 0.25 \times \frac{1}{3} =$  \_\_\_\_\_

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5.  $\frac{3}{8} \times 2.4 - \frac{9}{16} \div 1.5 =$  \_\_\_\_\_

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6.  $1 \div 2 \div 3 \div 4 \div 4 \times 2 \times 3 \times 4 =$

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7.  $\frac{1}{5 \times 5 \times 5 \times 5 \times 2 \times 2 \times 2} =$  (Answer as a decimal)

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8.  $(3 + 6 + 9 + 12 + 15) \times \frac{1}{1+2+3+4+5} =$  \_\_\_\_\_

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**2.6.4 Part D — Challenging Problems**

- 15 storybooks cost an average of \$5.95. If 10 of them cost an average of \$6.15, find the total cost of the rest of the storybooks.

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- The data below shows a type of detergent sold in 3 different sizes. Use this information to answer the following questions:

Size	Weight	Price
Small	1L	\$3.80
Medium	2L	\$6.40
Large	3L	\$8.35

- Linda bought 2 bottles from each of the 3 sizes. What was her change if she paid with two \$20 notes?

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- Later she bought a few medium-sized and 3 small-sized bottles of the detergent for \$49.80. Find the number of medium-sized bottles of detergent she bought.

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- There are twice as many litres of water in one container as in another. If 16 litres of water are moved from one container to another, there will be three times as many litres of water in one container as in the other. How many litres of water did the large container have at the beginning?

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4. Sharon had 25 tins of cooking oil.  $\frac{2}{5}$  of them had a capacity of 5 litres each and the rest had a capacity of 8 litres each. How much oil did Sharon have altogether?

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5. Cathy's monthly income is \$1950. She spends \$400 on food, \$150 on transportation and saves the rest. Express her expenditure as a fraction of her savings in its simplest form.

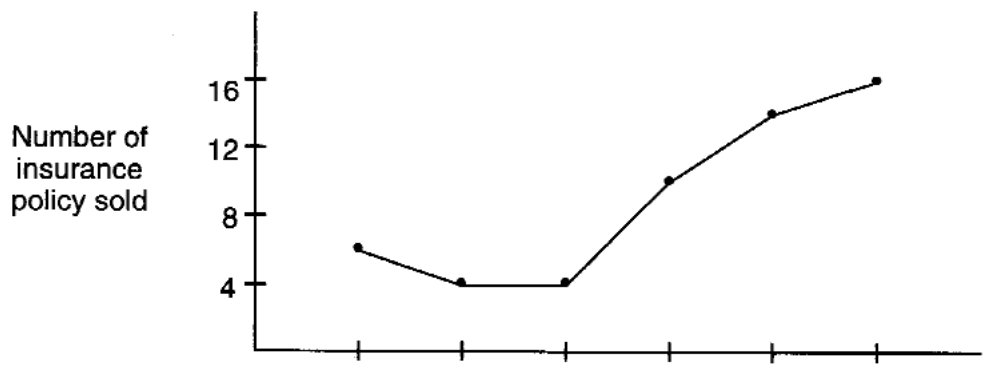
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6. The graph below shows the number of insurance policy Mr Lee sold for the first 6 months of a year. Use this information to answer the following questions:



- (a) If Mr Lee received a commission of \$500 for every policy sold, how much commission did he earn from January to June?

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- (b) Find the average number of insurance policies sold per month.

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