

Year 7 Term 2 Test

Student Name: _____	Grade: _____
Date: _____	Score: _____

- Answer the questions in the spaces provided on the question sheets.
- If you run out of room for an answer, continue on the back of the page.
- This test has 10 questions, for a total of 100 marks.
- Do not use a calculator.
- Attempt all 10 questions.
- Time allowed: 30 minutes.

Page:	1	2	3	Total
Points:	40	40	20	100
Score:				

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11 Year 7 Term 2 Test

1. Write these Roman numerals as Hindu-Arabic numerals.

(a) *MMCDXIX* [5]

(a) _____

(b) *M̄VCCLXXIV* [5]

(b) _____

2. Write each if these using Roman numerals.

(a) 1989 [5]

(a) _____

(b) 2049 [5]

(b) _____

3. Write the basic numeral for each of these:

(a) Fifty million and twenty-two thousand four hundred and nine. [5]

(a) _____

(b) Twelve thousands, forty-seven hundreds, eleven tens and twenty-two ones. [5]

(b) _____

4. Write the basic numeral for each of these.

(a) $(3 \times 10^6) + (5 \times 10^5) + (4 \times 10^4) + (2 \times 10^2) + (1 \times 10^0) =$ [5]

(a) _____

(b) $2^4 + 3^3 + 4^2 =$ [5]

(b) _____

5. Write down the following:

(a) the number which is 10 less than 9th Fibonacci number [5]

(a) _____

(b) the sum of the 8th square number and 9th square number [5]

(b) _____

(c) the HCF of 36 and 48 [5]

(c) _____

(d) the LCM of 36 and 48 [5]

(d) _____

(e) the number of days in July and August. [5]

(e) _____

(f) the number of years between 28 BC and 28 AD [5]

(f) _____

6. A flight from Adelaide takes off at 8:25 a.m. It lands in Hobart at 10:05 a.m. How long did the flight take? [5]

6. _____

7. Find an algebraic rule that links the top and bottom numbers the table shown below: [5]

x	1	2	3	4
y	0	3	6	9

8. Evaluate the following:

(a) $2\frac{2}{3} - \frac{1}{5} \div \frac{3}{4}$ [5]

(a) _____

(b) $0.245 - 1.25 \times 0.05$ [5]

(b) _____

9. There were 5 students sitting on the stage at the school assembly waiting to receive their prizes. [5]
Alice and Emma wanted to sit together. If they did, how many different arrangements of students would there be?

10. The length of a room is 3 metres more than its breadth. If the length was increased by 3 metres and [5]
the breadth was decreased by 2 metres, the area of the room will remain unchanged. Find the area of the original room.

11.1 Miscellaneous Exercises

Exercise 11.1.1

1. Joe bought apples at 3 for \$5. What was the maximum number of apples that he could buy with \$58?

2. A man stepped into an elevator on the third floor below ground level. The elevator went down two floors and then up four floors. Where is the elevator now in the relation to ground level?

3. The price of petrol rose by 5 cents per litre on Wednesday, fell by 8 cents on Friday then fell by another 3 cents on Sunday. How has the price of petrol changed overall since Wednesday?

4. Each pot costs \$40 less than each kettle. the total cost of 5 such kettles and 5 such pots is \$600. Find the cost of each pot.

5. Cathy spent 24% of her salary on food and 48% of it on rent. She saved half of her remaining money which was \$70. How much was her salary?

Exercise 11.1.2

1. The length of a rectangle is 180% that of its breadth. The perimeter of the rectangle is 84 cm. Find the area of the rectangle.

2. The length of a rectangle is 40% of its perimeter. If the length of the rectangle is 12 cm longer than its breadth, find the area of the rectangle.

3. An enclosed rectangular garden is 6 metres by 15 metres. Additional fencing within the garden can divide it into three smaller plots, two of them square and one rectangular. What is the least number of metres of additional fencing that is needed?

4. Five years ago, Linda's age was three times Bonnie's age. In two years Linda's age will be two times Bonnie's age. Find their present ages.

5. Find the whole number value of N such that $\frac{3}{80} < \frac{1}{N} < \frac{4}{101}$.

Exercise 11.1.3

1. We are given the following information about a certain square and a certain rectangle:

- Their areas are equal.
- The perimeter of the square is $\frac{4}{5}$ of the perimeter of the rectangle.
- the long side of the rectangle is 4 times the length of its short side.
- the perimeters, areas and sides of the 2 shapes are whole numbers less than 100.

What could be the dimensions of the square and the rectangle?

2. Is it possible for four numbers to have an odd number as their sum and an odd number as their product? If so, write the numbers. If not, say why not.

3. Freddie Fox decided that in the future he would tell lies on Monday, Wednesdays and Fridays but he would always tell the truth on the other days of the week. One day, Freddy said, "Tomorrow I will tell the truth." On what day of the week could he have said it?

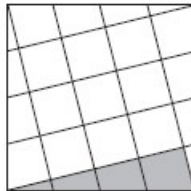
4. The ratio of two natural numbers is 3 : 2 and they are both multiples of 6. If we divide them by 6, the first quotient is 4 greater than the second quotient. What are the two numbers?

11.2 Math Challenge

Exercise 11.2.1

1. Luke asked his friend to guess how much money he had. He gave him this clue. My money could be made up in 20 different ways using just \$5 notes and \$2 coins. but it could not be made up with only \$2 coins. How much money did Luke have?

2. The sides of a square are each divided into 4 equal parts. Some of the points are joined up as shown in the diagram. What part of the area of the whole square is the area of the shaded part?



3. The members of a club rented a room for their function. 20 members attended the function and they paid the same amount towards the hire of the room. If another 5 members of the club had joined the function, everyone would each have paid \$10 less. How much did it cost to hire the function room?

4. At a school, David was asked for a clue about his age. This is what he said. "The current age of my father can be written with two digits and his age when I was born could be written with the same two digits". How old is David?
