J.M.J. Ch

MARCELLIN COLLEGE RANDWICK

YEAR 7

MATHEMATICS

ASSESSMENT TASK 1

2016

STUDENT NAME: MARK / 60

TEACHER:

TIME ALLOWED: 45 mins

WEIGHTING: 15 %

Section 1: Beginning in Number / 31

Section 2: Number and Indices / 24

Section 3: Multiple Choice / 5

Directions:

- Answer all the questions in the space provided.
- Show all necessary working. Where more than one mark is allocated to a question, full marks may not be awarded for answers only.
- Marks may not be awarded for careless or badly arranged work.
- Calculators are not permitted

SECTION ONE – Beginnings in Number (31 marks)

1. What is the place value of the 3 in the following numerals: *(2)*

   a) 431 725 b) 7301

2. Place the following decimal numbers in descending order: *(1)*

   0.5 0.55 0.05 5.05

3. Write 12 907 using words. *(1)*

4. Write five million, four hundred and seventy two thousand, six hundred and nine as a basic numeral. *(1)*

5. Write the following in expanded form: *(2)*

   a) 7 431 b) 603 824

6. Evaluate the following, showing all working out and expressing any remainder as a decimal: *(4)*

a) $42 \div 5$

b) $23 \div 3$

7. Find the basic numeral for the following, showing all working out: *(8)*

a) $2 \times 3 + 4$

b) $20 - 5 \times 2$

c) $(4 + 1) \times 5$

d) $\frac{5+7}{2}$

8. Use the distributive property to answer 5×106 *(2)*

9. Rewrite the following, replacing the symbols with words: $16 \div 2 \neq 8.5$ *(1)*

10. Insert the correct symbol to make the following statement true: *(1)*

$$(10 - 3) \times 11 = 100 \square 2 + 27$$

11. Complete the next three numbers of the pattern: *(3)*

$1, 4, 9, \_\_\_\_, \_\_\_\_, \_\_\_\_$

12. What are the symbols or abbreviations for the following terms: *(4)*

Term	Symbol/Abbreviation
Percent	
Therefore	
Approximately equal to	
Cube root	

13. What are the five digits must all even numbers end in? *(1)*

SECTION TWO – Number and Indices (24 marks)

1. Rewrite the following in index form: *(2)*

a) $5 \times 5 \times 5 \times 5$ b) $2 \times 2 \times 2 \times 7 \times 7$

2. Write the following in expanded form: *(2)*

a) 6^3 b) 3^6

3. Write 10^4 in expanded form and find the basic numeral. *(2)*

4. Write the numeral 76 058 in expanded form using base ten notation. *(1)*

5. List all of the factors of 18 and 40, Use this to help you find the Highest Common Factor (HCF). *(2)*

18	
40	

HCF =

6. List the first ten multiples of 7 and 8 and then use this to help you find the Lowest Common Multiple (LCM). *(2)*

7	
8	

LCM =

7. Create a factor tree for the number 48 and express it as a product of its prime factors. *(2)*

8. Write the basic numeral for $(8 \times 10\,000) + (7 \times 100) + (6 \times 10) + (9 \times 1)$ *(1)*

9. Find the HCF and LCM of 28 and 30 by first drawing factor trees for each and expressing each number as a product of its prime factors. *(4)*

HCF =

LCM =

10. Simplify the following, showing all working out: *(4)*

a) $2^3 + 2^2$

b) $2^2 \times 5^3$

11. Complete the following: *(2)*

a) If $15 \times 15 = 225$
then $\sqrt{225} =$

b) If $(4 \times 6) \times (4 \times 6) = 576$
then $\sqrt{576} =$

SECTION THREE – Multiple Choice (5 marks)

Circle ONE correct response for each question

1. Which of the following numbers is divisible by 4?

A. 81 212 B. 95 626 C. 50 010 D. 444 454

2. Which of the following is a prime number?

A. 27 B. 73 C. 33 D. 105

3. What is the basic numeral for 4^3?

A. 12 B. 7 C. 64 D. 1

4. When $100 - 6 \times 2 + 4$ is calculated the answer is:

A. 92 B. 192 C. 564 D. 64

5. What is the answer to $\sqrt[3]{8}$?

A. 24 B. 16 C. 4 D. 2

MARCELLIN

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MATHEMATICS – ASSESSMENT TASK 1

1. a) 30000

b) 300

2. 5.05, 0.55, 0.5, 0.05

3. Twelve thousand nine hundred and seven.

4. 5472609

5. a) $(7\times1000)+(4\times100)+(3\times10)+1$

b) $(6\times100000)+(3\times1000)+(8\times100)+(2\times10)+4$

6a) $42\div5 = \frac{40}{5}+\frac{2}{5} = 8+\frac{2}{5}$ ⇒ Remainder = 0.4 (REMAINDER)

b) $23\div3 = \frac{21}{3}+\frac{2}{3} = 7+\frac{2}{3}$ ⇒ Remainder = 0.6

7. a) $2\times3+4$
$= (2\times3)+4$
$= 6+4$
$= 10$

b) $20-(5\times2)$
$= 20-10$
$= 10$

c) $(4+1)\times5$
$= 5\times5$
$= 25$

d) $\frac{SH7}{2} = \frac{N2}{2} = 6$

8. 5×106
$= 5\times(100+6)$
$= (5\times100)+(5\times6)$
$= 500+30$
$= 530$

9. "16 divided by 2 is not equal to 8.5"

10. $(10-3)\times11 = 100\div2+27$

11. 1, 4, 9, 16, 25, 36

12. Percent → %
Therefore → ∴
Approx. equal to → ≈ or ≒
Cube root → $\sqrt[3]{\ }$

13. 0, 2, 4, 6, 8

SECTION 2

1. a) $5\times5\times5\times5 = 5^4$

b) $2\times2\times2\times7\times7$
$= 2^3+7^2$

2. a) $6^3 = 6\times6\times6$

b) $3^6 = 3\times3\times3\times3\times3\times3$

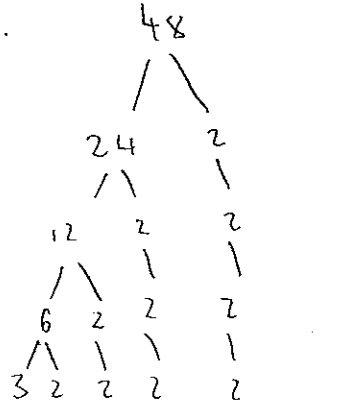
3. $10\times10\times10\times10$
$= 10000$

4. 76058
$= 7\times10000 = 7\times10^4$
+
$6\times1000 = 6\times10^3$
+
$5\times10 = 5\times10^1$
+
$8\times10^0 = 8$
$= 7\times10^4+6\times10^3+5\times10+8$

5. Factors of 18
18, 9, 6, 3, 2, 1
Factors of 40
40, 20, 10, 8, 5, 4, 2, 1
HCF = 2.

6. 7 – 7, 14, 21, 28, 35, 42, 49, 56, 63, 70
8 – 8, 16, 24, 32, 40, 48, 56, 64
72, 80
LCM → 56

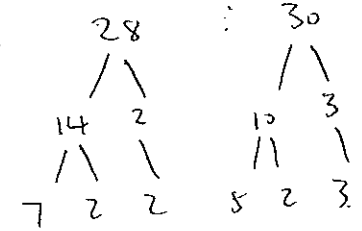
7.



$3 \times 2 \times 2 \times 2 \times 2 = 48$

8. 80769

9.



$7 \times 2 \times 2 = 28$, $5 \times 2 \times 3 = 30$

HCF = 2.

LCM = 420

10. a) $2^3 + 2^2$

$= (2 \times 2 \times 2) + (2 \times 2)$

$= 8 + 4 = 12$

b) $2^2 \times 5^3$

$= 2 \times 2 \times 5 \times 5 \times 5$

$= 4 \times 125 = 500$

11. If $15 \times 15 = 225$

then $\sqrt{225} = 15$

If $(4 \times 6) \times (4 \times 6) = 576$

then $\sqrt{576} = (4 \times 6) = 24$

SECTION 3

1. A
2. B
3. C
4. A
5. D.