

NUMBER THEORY WORKSHEET BJC REVIEW

NAME: _____

DATE: _____

ANSWER ALL QUESTIONS

SECTION A- Review

1. Solve

(a) $21,433 + 7,086 + 12$

(b) $8,203 - 4,136$

Answer= _____

Answer= _____

(c) $4,056 \times 3$

(d) $7025 \div 5$

Answer= _____

Answer= _____

2. From the set of numbers $\{1,2,3,4,5,6,7,8,9,10\}$, write down:

(i) The smallest prime number _____

(ii) The smallest multiple of 2 _____

(iii) The largest factor of 12 _____

(iv) The number that is neither prime nor composite _____

3. A Mathematics lesson started at 9:05. It ended at 10:18. How long did the lesson last?

Answer= ____ hr ____ min

4. Solve using PEMDAS

(a) $7 + 4 \times 2$

(c) $63 \div 9 \times 7 + 2$

Answer= _____

Answer= _____

(b) $3 + (9 - 7)^2 \times 5 - 2$

Answer= _____

5. Complete each number sequence by filling in the next two numbers in the sequence:

(a) 8, 16, 24, 32, _____, _____

(b) 2, 3, 5, 8, 13, _____, _____

(c) 1, 4, 9, 16, _____, _____

SECTION B-PRIME FACTORISATION

1. To use PRIME FACTORISATION to calculate the HCF of the following sets of numbers:

(a) 12 and 16

(b) 24, 30 and 48

Ans= _____

Ans= _____

2. To use PRIME FACTORISATION to calculate the LCM of the following sets of numbers:

(b) 6 and 8

(b) 30 and 45

Ans= _____

Ans= _____

3. The prime factors of two numbers are given below:

First Number: _____ = $2 \times 2 \times 2 \times 3$

Second Number: _____ = $2 \times 2 \times 3 \times 3$

(a) What are the two numbers? (Write your answers of the lines above)

(b) What is the (i) HCF _____ of the two numbers?

(ii) LCM _____

4. (a) Express 144 as a product of its prime factors.

$$144 = \underline{\quad} \times \underline{\quad} \times \underline{\quad} \times \underline{\quad} \times \underline{\quad} \times \underline{\quad}$$

(b) Hence, find $\sqrt{144}$

Answer = $\underline{\hspace{2cm}}$

5. (a) Express 1000 as a product of its prime factors.

$$1000 = \underline{\quad} \times \underline{\quad} \times \underline{\quad} \times \underline{\quad} \times \underline{\quad} \times \underline{\quad}$$

(b) Hence, find $\sqrt[3]{1000}$

Answer = $\underline{\hspace{2cm}}$