Primes, Factors & Multiples   17 marks

1.   (a)   Find the Highest Common Factor of 75 and 90.

………………………………

(2)

    (b)   Find the Lowest Common Multiple of 75 and 90.

………………………………

(2)

(Total 4 marks)

2.   Find the Highest Common Factor of 108 and 180.

………………………………

(Total 2 marks)

3.   Find the highest common factor of 54 and 72.

…………………………

(Total 2 marks)

4. Find the highest common factor of 36 and 54.

…………………

(Total 2 marks)

5. *p* is a prime number not equal to 7

(a) Write down the Highest Common Factor (HCF) of

$$49p \quad \text{and} \quad 7p^2$$

....

(1)

x and *y* are different prime numbers.

(b) (i) Write down the Highest Common Factor (HCF) of the two expressions

$$x^2y \qquad xy^2$$

....

(ii) Write down the Lowest Common Multiple (LCM) of the two expressions

$$x^2y \qquad xy^2$$

....

(3)

(Total 4 marks)

6. $A = 2^4 \times 3^2 \times 7$ $\qquad B = 2^3 \times 3^4 \times 5$

A and *B* are numbers written as the product of their prime factors.

Find

(i) the highest common factor of *A* and *B*,

....

(ii) the lowest common multiple of *A* and *B*.

....

(Total 3 marks)