HCF AND LCM

[ESTIMATED TIME: 45 minutes]

GCSE

(+ IGCSE) EXAM QUESTION PRACTICE

1. **[2 marks]**

Find the Lowest Common Multiple (LCM) of 20 and 24

.....

2. **[4 marks]**

(a) Find the Highest Common Factor (HCF) of 54 and 90

.....

(2)

(b) Find the Lowest Common Multiple (LCM) of 54 and 90

.....

(2)

Questions compiled by:
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3. **[2 marks]**

The highest common factor (HCF) of 140 and x is 20

The lowest common multiple (LCM) of 140 and x is 420

Find the value of x.

$x =$ .....

4. **[2 marks]**

$S = 2^4 \times 3 \times 7^2$

$T = 2 \times 5^3 \times 7^3$

Find the Highest Common Factor (HCF) of S and T.

.....

(2)

5. **[2 marks]**

$A = 2^3 \times 3^2 \times 5^4$

$B = 3^5 \times 5 \times 7^3$

Find the Highest Common Factor (HCF) of A and B.

.....

6. **[4 marks]**

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

.....

(2)

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

.....

(2)

7. **[4 marks]**

(a) Find the Highest Common Factor of 64 and 80

.....

(2)

(b) Find the Lowest Common Multiple of 64 and 80

.....

(2)

8. **[2 marks]**

x is an integer.
The Lowest Common Multiple (LCM) of x and 12 is 120
The Highest Common Factor (HCF) of x and 12 is 4

Work out the value of x.

$x =$ .....

9. **[2 marks]**

Given that $A = 2^3 \times 3$ and $B = 2^2 \times 3^2$

find the Lowest Common Multiple (LCM) of A and B.

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10. **[4 marks]**

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

(a) Find the highest common factor (HCF) of A and B

.....

(2)

(b) Find the lowest common multiple (LCM) of A and B

.....

(2)

11. **[4 marks]**

$3780 = 2^2 \times 3^3 \times 5 \times 7$	$3240 = 2^3 \times 3^4 \times 5$

(a) Find the highest common factor (HCF) of 3780 and 3240
Give your answer as a product of prime factors.

.....

(2)

(b) Find the lowest common multiple (LCM) of 3780 and 3240
Give your answer as a product of prime factors.

.....

(2)

12. **[4 marks]**

(a) Find the Highest Common Factor of 75 and 105.

.....

(2)

(b) Find the Lowest Common Multiple of 75 and 105.

.....

(2)

13. **[4 marks]**

$$267\,300 = 2^2 \times 3^5 \times 5^2 \times 11$$

$$246\,960 = 2^4 \times 3^2 \times 5 \times 7^3$$

(a) Find the highest common factor (HCF) of 267 300 and 246 960
Give your answer as a product of prime factors.

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(2)

(b) Find the lowest common multiple (LCM) of 267 300 and 246 960
Give your answer as a product of prime factors.

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(2)

14. **[4 marks]**

(a) Find the Highest Common Factor of 72 and 90

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(2)

(b) Find the Lowest Common Multiple of 72 and 90

.....

(2)