## **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)** 



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.

 $\chi = \dots$ 

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.

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

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

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

6. [4 marks

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



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



(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.

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

3780	$= 2^2 >$	$\langle$ $3^3 \times$	5 ×	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.



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



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

**(2)** 

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

14.

[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.

(2)

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

(2)

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

(2)

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