

# Answer 3 – HCF and LCM

## Find the Highest Common Factor (HCF)

We need to know the factors of the numbers before we can find the HCF.

1.	$1 \times 16 = 16$ $2 \times 8 = 16$ $4 \times 4 = 16$	$1 \times 18 = 18$ $2 \times 9 = 18$ $3 \times 6 = 18$
	<b>Factors of 16 :</b> 1, 2, 4, 8, 16 and <b>Factors of 18:</b> 1, 2, 3, 6, 9, 18 The numbers common in both of the lists are: 1 and 2. <b>HCF is 2.</b>	
2.	$1 \times 20 = 20$ $2 \times 10 = 20$ $4 \times 5 = 20$	$1 \times 24 = 24$ $2 \times 12 = 24$ $3 \times 8 = 24$ $4 \times 6 = 24$
	<b>Factors of 20 :</b> 1, 2, 4, 5, 10, 20 and <b>Factors of 24:</b> 1, 2, 3, 4, 6, 8, 12, 24 The numbers common in both of the lists are: 1, 2 and 4 <b>HCF is 4.</b>	
3.	$1 \times 45 = 45$ $3 \times 15 = 45$ $5 \times 9 = 45$	$1 \times 60 = 60$ $2 \times 30 = 30$ $4 \times 15 = 60$ $5 \times 12 = 60$ $6 \times 10 = 60$
	<b>Factors of 45:</b> 1, 3, 5, 9, 15, 45 <b>Factors of 60 :</b> 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60 The numbers common in both of the lists are: 1, 3, and 15 <b>HCF is 3.</b>	

## Find the Lowest Common Multiple (LCM)

We need to know the multiples of the numbers before we can find the LCF.

1.

**Multiples of 6:**

6, 12, 18, 24, 30, 36, 42, 48

**Multiples of 8:**

8, 16, 24, 32, 40, 48

We can see the numbers 24 and 48 appear in both the multiples.  
The smallest number is 24.

**LCM is 24.**

2.

**Multiples of 2:**

2, 4, 6, 8, 10, 12, 14, 16, 18, 20

**Multiples of 5:**

5, 10, 15, 20, 25

We can see the numbers 10 and 20 appear in both the multiples.  
The smallest number is 10.

**LCM is 10.**

3.

**Multiples of 15:**

15, 30, 45, 60, 75, 90, 105, 120

**Multiples of 20:**

20, 40, 60, 80, 100, 120

We can see the numbers 60 and 120 appear in both the multiples.  
The smallest number is 60.

**LCM is 60.**