

## Common Factors and the HCF

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Examples



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Workout

- Question 1: (a) List all the factors of 10  
(b) List all the factors of 15  
(c) Write down all the common factors of 10 and 15.
- Question 2: (a) List all the factors of 12  
(b) List all the factors of 18  
(c) Write down all the common factors of 12 and 18.
- Question 3: Write down all the common factors of each of these pairs of numbers.
- (a) 6 and 8            (b) 15 and 20            (c) 9 and 15            (d) 7 and 14  
(e) 30 and 40            (f) 21 and 27            (g) 18 and 30            (h) 16 and 24
- Question 4: (a) List all the factors of 14  
(b) List all the factors of 21  
(c) Find the highest common factor (HCF) of 14 and 21.
- Question 5: (a) List all the factors of 24  
(b) List all the factors of 36  
(c) Find the highest common factor (HCF) of 24 and 36.
- Question 6: Find the highest common factor (HCF) of each of these pairs of numbers.
- (a) 4 and 14            (b) 6 and 9            (c) 9 and 21            (d) 8 and 12  
(e) 6 and 15            (f) 10 and 17            (g) 30 and 45            (h) 40 and 60  
(i) 28 and 63            (j) 24 and 36            (k) 16 and 28            (l) 18 and 45  
(m) 150 and 200            (n) 12 and 54            (o) 90 and 270            (p) 39 and 65
- Question 7: Find the highest common factor (HCF) of each of these sets of numbers.
- (a) 12, 6 and 15            (b) 27, 33 and 12            (c) 30, 15 and 25            (d) 8, 20 and 12  
(e) 10, 25 and 13            (f) 12, 24 and 30            (g) 9, 36 and 45            (h) 100, 125 and 200

## Apply

- Question 1: Martin says that 6 is a common factor of 42, 36 and 50.  
Is he correct?
- Question 2: Alannah has two lengths of ribbon.  
One length of ribbon is 36cm long and the other length is 45cm long.  
Alannah wants to cut lengths of ribbon into shorter lengths that are of equal length.  
Alannah does not want any ribbon left over.  
What is the longest possible length for each of the shorter lengths of ribbon?
- Question 3: Sam has completed his maths homework.  
Can you spot any mistakes?

Find the highest common factor of 18 and 36

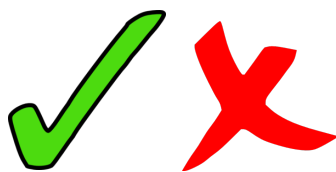
Factors of 18: 2, 3, 6, 9

Factors of 36: 2, 3, 4, 6, 9, 12, 18

HCF = 9

- Question 4: Olivia thinks of two numbers.  
The lowest common multiple (LCM) of the two numbers is 36.  
The highest common factor (HCF) of the two numbers is 3.  
Both numbers are less than 15.  
Write down two possible numbers that Olivia could be thinking of.
- Question 5: Niamh thinks of two numbers.  
The highest common factor (HCF) of the two numbers is 8.  
The lowest common multiple (LCM) of the two numbers is a multiple of 5.  
Write down two possible numbers that Niamh could be thinking of.
- Question 6: Emily thinks of two numbers.  
The highest common factor (HCF) of the two numbers is 1.  
The lowest common multiple (LCM) of the two numbers is a multiple of 40.  
Write down two possible numbers that Emily could be thinking of.

## Answers



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