

# Tenbury High Ormiston Academy Maths Department

## Stage 8 Home Learning project. Autumn term 1

Name:.....

Tutor group: .....

Teacher:.....

### Deadlines

Task 1: .....

Task 2: .....

Task 3: .....

Task 4: .....

If you have any problems with any of the tasks then please ask your class teacher or pop along to homework club on Tuesday, Wednesday or Thursday lunchtimes in room 23.

**All tasks should be completed in your maths book.**

**TASK 1:** Complete each of the tasks below.

Make notes and give an example.

Give the definition of each keyword.

Factors, Multiples, HCF and LCM

**Literacy** Unscramble the anagrams and define the words.

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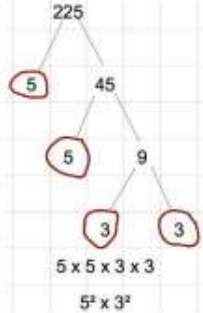
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**Research**

When might you use the HCF and LCM in real life?



Factor trees are used to find the product of prime factors. The two branches multiply together to make the number above. Circle and stop at prime numbers.



**Memory**

$5 \times 5 \times 3 \times 3$   
 $5^2 \times 3^2$

**Skill 1** Factors and Multiples

1) List first five multiples of:

- a) 8
- b) 12
- c) 18

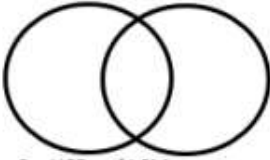
2) List all the factors of:

- a) 16
- b) 36
- c) 48

**Skill 2** HCF and LCM

Find the HCF and LCM of 72 and 36  
Step 1 – factor trees

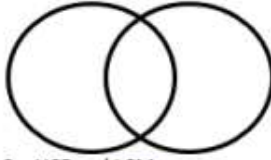
Step 2 Venn Diagram



Step 3 – HCF and LCM  
(HCF-all middle numbers multiplied, LCM all numbers multiplied)  
HCF=  
LCM =

Find the HCF and LCM of 81 and 48  
Step 1 – factor trees

Step 2 Venn Diagram




Step 3 – HCF and LCM  
(HCF-all middle numbers multiplied, LCM all numbers multiplied)  
HCF=  
LCM =

[www.missbsresources.com](http://www.missbsresources.com)

**Stretch**                      **WorDED Exam Question**

Bus A stops every 12 minutes and Bus B stops every 9 minutes on the same circuit. They stop at the same bus stop at 9:15am. When is the next time this happens?



## Task 2: Directed number challenge

### directed numbers puzzle

Use these clues to work out the numbers in the grid.

#### Clues

1. The number in the centre equals  $-5 - 3$
2. The number that goes in the top right box is 5 less than  $-5$
3. The number in the bottom left is  $-3 \times -3$
4. The number in the top left is the number in the centre add  $-3 \times -1$
5. The number in the middle of the bottom row is 6 less than the number above it.
6. There is a number 6 in one of the middle row boxes.
7. There is a number equal to  $-4 \times -5$  next to the box containing  $-5$
8. When you add up the right hand column you get  $-27$
9. The number below  $-5$  is  $-6 - 10$


### Task 3: Computer based homework task

Using [www.corbettmaths.com](http://www.corbettmaths.com) watch the following videos and answer the questions set in your homework book.  
You must show all of your working out.

#### **Video 112 Order of operations**

<i>Green</i>	<i>Amber</i>	<i>Red</i>	<i>Killer</i>
Textbook exercise Q1 Apply questions 1-3	Textbook exercise Q2 Apply questions 1-3	Textbook exercise Q2 and Q3 Apply questions 1-5	Textbook exercise Q3 and Q4 Apply questions 1-5

### Task 4: UKMT maths challenge task

This task will be given to you in class. You must show all your working out for each of the problems.