

# Level 5 MULTIPLICATION & DIVISION

Bloomsmath is a comprehensive mathematics program which provides a fun way for every student to be learning to the best of their ability.

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# Multiplication & Division

Level 5 is designed for students in their fifth year at school often called Year 4. Students will use mental and informal written strategies for multiplication and division.

Knowledge: Students will match factors and multiples.



Students who demonstrate proficiency in this activity move on to Comprehension.



Students stop here as they require additional teacher support to master this activity.

Comprehension: Students will play "Man Overboard" to identify various common factors and multiples.



Students who demonstrate proficiency in this activity move on to Application.



Students stop here if time has run out or they require additional support with this activity.

Application: Students will play "Mount Multiplication" where numbers are multiplied to reach the mountain peak.



Students who demonstrate proficiency in this activity move on to Analysis.



Students stop here if time has run out or they require additional support with this activity.

Analysis: Students will play "Mount Multiplication" again. This time the peak is given and students must use division to find the missing numbers.



Students who demonstrate proficiency in this activity move on to Synthesis.



Students stop here if time has run out or they require additional support with this activity.

Synthesis: Students will make a "Mount Multiplication" for a classmate to solve.

Evaluation: Suggested questions provide a starting point for discussions related to Multiplication and Division.



Students may complete more or fewer activities for each learning outcome depending on the time allocated and their strength in the area being covered.



All students should participate in the Evaluation discussion to encourage the use of mathematical language, logical reasoning and reflection on that which they have completed.

## Knowledge

See if you can match the numbers below to their relevant factors. Ie. 30 will match to 2, 3 and 5 as it is a multiple of all of these numbers.

Some numbers will have lots of multiples while others will match to none of the factors given.

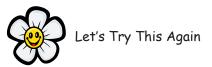
Name: \_

See if you can list all the factors for each number below. What do these 3 numbers have in common?

18:

24:

30:

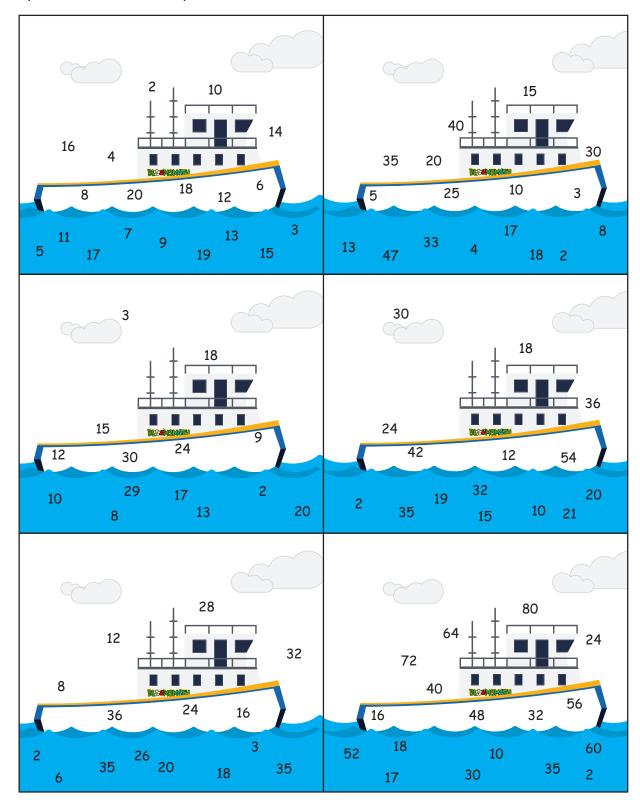


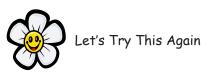


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## Comprehension

In "Man Overboard" the numbers on each ship are all multiples of the ship number. The numbers in the sea are not multiples of the ship number. See if you can find the ship number of each ship below.





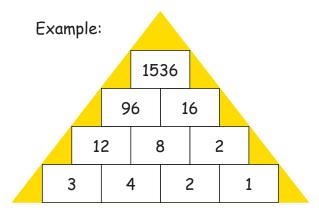


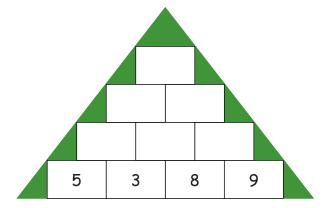
## **Application**

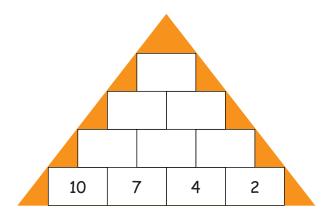
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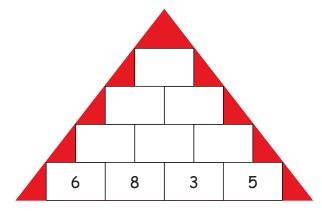
See if you can solve each "Mount Multiplication" below where numbers are multiplied to reach the mountain peak.

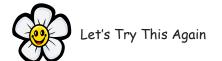
#### **Mount Multiplication**









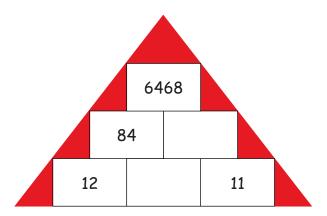


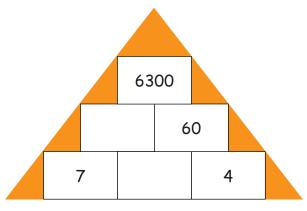


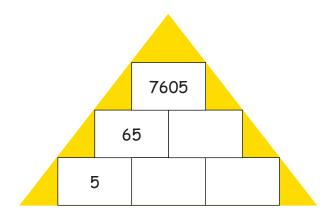
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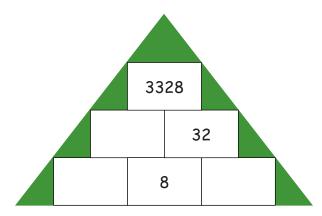
## Analysis

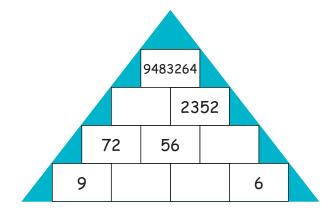
See if you can solve each of these 6 reverse "Mount Multiplications" using division.

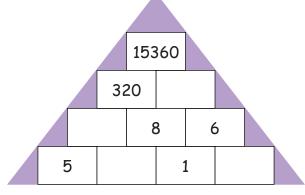










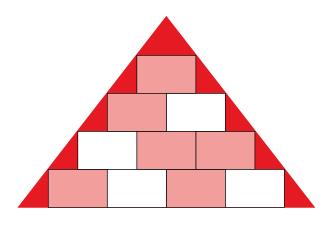


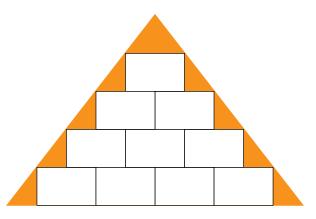


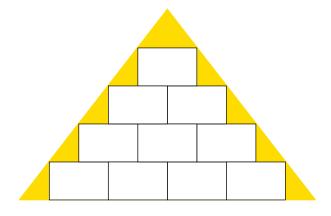


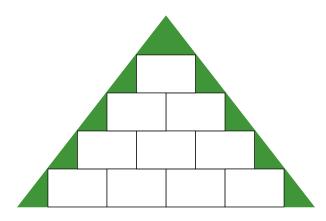
### Synthesis

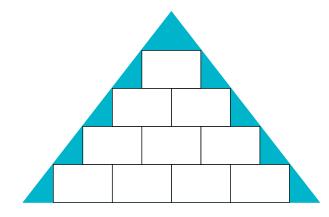
Use the templates below to make 6 reverse "Mount Multiplications" for a classmate to solve. You need to create the entire mountain and then rub out the numbers to leave just enough numbers for your partner to be able to solve the puzzle. The first one has been shaded to help you see what to leave.

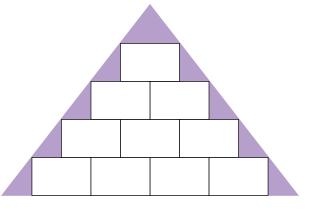


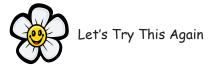














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#### Evaluation

The following questions and activities are provided as a starting point for fun discussions related to Multiplication and Division. During these conversations students will have an opportunity to use appropriate mathematical language in its correct context, to engage in reflection on the Multiplication and Division activities they have completed and to use logical reasoning to tie their in-class mathematics to its everyday context.



See how many variations students can create for a given peak number such as 2700 for a 3 tier mountain.



Can the same peak number be used when extra layers of mountain are added such as a row of 5 or 6 blocks on the base?



Is it harder or easier to solve the mountain from the base with multiplication or the top with division?



What is the smallest top number you can make for a 4 tier mountain using just positive numbers?



Play a class game of man overboard where the class take it in turn to offer numbers and the student who is in must place them either on the ship or in the water until the class can guess which multiple they are using.

