Divisibility

The rules for divisibility are:

A number is divisible by:	If:
2	The last digits is 2, 4, 6, 8 or 0
3	The sum of digits is divisible by 3.
4	The number formed by the last two digits is divisible by 4.
5	The last digit is 0 or 5
6	It is divisible by 2 and 3 at the same time.
8	The number formed by the last three digits is divisible by 8.
9	The sum of digits is divisible by 9.
10	The last digit is 10.

Examples:

A- Tell whether each number is divisible by 2, 3, 4, 5, 6, 8, 9, or 10.

1) 432

   Divisible by 2: Look at the last digit, it is 2 → It is divisible by 2.
   Divisible by 3 : Add the digits 4 + 3 + 2 = 9, 9 ÷ 3 = 3 it is divisible by 3.
   Divisible by 4: Look at the last two digits: 32 ÷ 4 = 9 → It is divisible by 4.
   Divisible by 5: Look at the last digit, it is 2 → It is not divisible by 5.
   Divisible by 6: 432 is divisible by 3 and 2, so it is divisible by 6.
   Divisible by 8: 432 ÷ 8 = 54.
   Divisible by 9: Add the digits 4 + 3 + 2 = 9, 9 ÷ 9 = 1 → It is divisible by 9.
   Divisible by 10: Look at the last digit, it is 2 → It is not divisible by 10.

2) 765

   Divisible by 2: Look at the last digit, it is 5 → It is not divisible by 2.
   Divisible by 3 : Add the digits 7 + 6 + 5 = 18, 18 ÷ 3 = 6 it is divisible by 3.
   Divisible by 4: Look at the last two digits: 65 ÷ 4 = -- → It is not divisible by 4.
   Divisible by 5: Look at the last digit, it is 5, 765 ÷ 5 = 153 → It is divisible by 5.
   Divisible by 6: 765 is divisible by 3 but not 2, so it is not divisible by 6.
   Divisible by 8: 765 ÷ 8 = -- → It is not divisible by 8.
   Divisible by 9: Add the digits 7 + 6 + 5 = 18, 18 ÷ 9 = 2 → It is divisible by 9.
   Divisible by 10: Look at the last digit, it is 5 → It is not divisible by 10.

B- For the U.A.E. National Day, the number of marching sixth graders is 168 students. Can the students be organized in 6 groups?

   168 ÷ 6 = 28 students
Sixth graders can be divided in 6 groups of 28 students each.

Grade 6