CONSECUTIVE INTEGERS

Integers written in the normal order, one after the other, are consecutive integers.

. . $-3, -2, -1, 0, 1, 2, 3, 4, 5, \ldots\ldots$

Some interesting facts about consecutive integers:

1. The sum of a list of consecutive integers can be calculated by multiplying the average of the numbers by the number of integers. For example

   The average of terms is $\frac{-1+3}{2} = 1$ and there are 5 terms. So the sum must be equal to 1 x 5 = 5.

2. The product of x consecutive integers is perfectly divisible by x!.
   Example:

   The product is 2 x 3 x 4 x 5 x 6 x 7 = 5040
   Whereas 6! = 720
   And 5040/720 = 7

3. Any pair of consecutive integers has one even and one odd integer.

4. The product of any two consecutive integers is always even.

5. Any 3 consecutive integers always have one integer divisible by 3.

6. The product of any 3 consecutive integers is always divisible by 2, 3, and 6.

7. The product of any 5 consecutive integers is always divisible by 2, 3, 4, 5, and 6.