## Numbers

To find number patterns, look for numbers that are repeated or a series of events that repeat. It is important to try different numbers in finding missing numbers in a pattern. By trying out different numbers, the right pattern and number will make itself clear.

Remember the new number depends upon the number before it. Additionally, it may also be dependent on the difference between the numbers that are next to each other.

## Example 1

What number comes next in the following sequence of numbers?
1, 4, 5, 9, 14, 23, 37 $\qquad$
Explanation

$$
\begin{aligned}
& \begin{array}{lllllll}
1 & 4 & 5 & 9 & 14 & 23 & 37
\end{array} \\
& 1+4=5 \\
& 4+5=9 \\
& 5+9=14 \\
& 9+14=23 \\
& 14+23=37
\end{aligned}
$$

From the third number, each number is the sum of the previous two.

Therefore the next number is $23+37=60$.

## Example 2

What is the number pattern below?
3, 6, 12, 24, 48, 96, 192

Explanation


Each number is the multiplication of the previous one with 2.

## Example 3

What number comes next in the following sequence of numbers?
$2,4,8,14,22,32$, $\qquad$
Explanation


Therefore the next number is 44 .

## Example 4

What is the number pattern below?
$4,5,12,5,36,5,108,5$
Explanation

5 is repeating.


Each number is previous number $\times 3$.

