

# Number Nest Weekly Challenge

This week's challenge is slightly different. First you have a warm up round, to get your brain in the right mode. Then, there is a challenge about five families. You will need to work through the clues to find out the information about the families.



## Warm up round!

1. What is  $10,000 - 1,000 + 100 - 10 + 1$ ?
2. What is  $\frac{1}{32} + \frac{1}{16} + \frac{1}{8} + \frac{1}{4} + \frac{1}{2}$  in its simplest form?
3. Andrew has more money than Nicky. If Andrew gave Nicky £4, they would have the same amount. While if Nicky gave Andrew £6, Andrew would then have twice as much as Nicky. How much does each one actually have?
4. What is  $\frac{2}{3}$  of  $\frac{3}{10}$  of 90 minus  $\frac{5}{6}$  of  $\frac{6}{7}$  of 49?
5. What is 20% of 30% of 450?
6. Two tables each have three boxes of chocolate on them. Each box has four chocolates in them and each chocolate contains five coffee beans. How many coffee beans are on both tables?
7. The mean, median and modal age in years of four children aged at least one-year old is 3. How many possible combinations are there of the four children's ages? (2,3,3,4 is the same as 3,3,4,2)
8. What is the sum of the different prime numbers which divide 735 perfectly.
9. How many two-digit numbers can be formed using only the numbers 1, 2, 3, 4 and 5? Each digit can only be used once for each two-digit number.
10. What is 15% of 40% of 600?



## Five Families

Can you use the clues to figure out all the information about these five families. The information required is; family name, pet, car colour, number of children and holiday destination. Use the grid on the next page to help you find out the answers.

On the answer grid their house numbers have been given for you.

- The Pines have a pet leopard.
- The owners of the pet lion holiday in Norway.
- The owners of the black car appear next to the owners of the elephant on the grid.
- The Ash family have two more children than the Oak family.
- The owners of the giraffe have half as many children as two of the other families.
- If you square the number of children in the Pine family, then cube that answer, you get the house number where the Redwoods live.
- The Oak family live at number 4.
- The Elm family own a white car.
- The number of children in the Ash family is a factor of their house number.
- The family that holiday in Germany have one child.
- The Redwoods and the Pines have the same number of children.
- The pet elephant lives at number 27.
- The family that holiday in France have a house number which is both a square number and a cube number.
- The owners of the yellow car have the same number of children as the Pines.
- The owners of the black car holiday in Germany.
- The number of children in one of the families is the same as their house number.
- The family that holiday in Portugal appear next to the owners of the pet crocodile on the grid.
- The owners of the red car holiday in Spain with their two children.
- There are 13 children in all.
- The owners of the pet giraffe appear next to the family that holiday in Portugal on the grid.
- The families that holiday in Spain and France have the same number of children.
- The pet leopard lives in the house which has the lowest number.
- There are 5 children in the house with the pet lion.
- The Ash family own an orange car.
- All the families have at least one child.
- The house number of the owners of the yellow car is between the house numbers of the owners of the lion and the elephant.



<b>House Number</b>	<b>2</b>	<b>4</b>	<b>27</b>	<b>64</b>	<b>97</b>
<b>Family name</b>					
<b>Pet</b>					
<b>Colour of car</b>					
<b>Number of children</b>					
<b>Holiday destination</b>					