

Number Nest Weekly Challenge



Warm up

- What is the answer to $2222 + 222 + 22 + 2$?
- Isaac Newton was born on 4th January 1643. How old was he in September 1712?
- I have been riding my bike for 15 minutes at 12 miles per hour. How many miles have I cycled?
- What is the sum of all the prime numbers between 22 - 65?

Main challenge

- If the digit 4 is replaced by the digit 3 in each of the numbers below, which number is reduced by the largest amount?

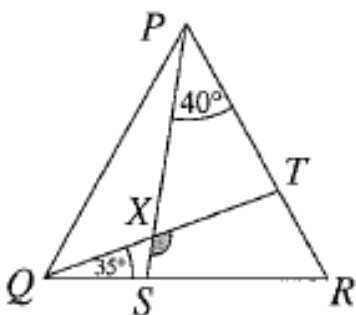
A) 45678 B) 87654 C) 95400 D) 74000 E) 99949

- It is well known that the Pobble has no toes, and that the three-toed sloth has 12 toes (3 on each of its 4 feet). A synchronised swimming team is made up of 7 Pobbles and 5 three-toed sloths. What is the mean number of toes per team member?

- If an octopus can open four marmalade jars simultaneously and each jar takes twenty seconds to open, how many jars can the octopus open in two hours?

Remember - The mean is an average. To find the mean, add all the numbers together then divide by the number of numbers.

- Triangle PQR is equilateral. Angle SPR = 40° , angle TQR = 35° . What is the size of the marked angle SXT?



Bonus

Grandma tells Mabel that her glove drawer contains 1 left-hand blue glove, 2 left-hand green gloves, 3 right-hand blue gloves, and 4 right-hand green gloves, and asks her to bring a pair of gloves from the drawer. Unfortunately, Mabel cannot tell the difference between left-hand and right-hand gloves, but, thankfully, can identify blue and green. What is the smallest number of gloves that Mabel should bring, in order to be sure that these include a matching pair?

