

20.05.24



## Number Nest Weekly Challenge

### Warm up

1.  $20 + 0.6 + 0.02 =$  **20.62**
2. I have a litre bottle of cola. I drink 650ml. How much is left? **350ml**
3. Which two numbers have a sum of 15 and a product of 36? **3 & 12**
4.  $4\frac{1}{3} - 1\frac{2}{3} =$   **$2\frac{2}{3}$**
5. Write down all the factors of 33. **1, 3, 11, 33**
6. Flight time from Houston to Orlando is 2 hours and 20 minutes. I arrive in Orlando at 4:15pm. What time did I set off? **13:55**
7. The time is quarter to 7 in the evening. Write this in 24-hour time. **18:45**

### Activity

1. Mary left her home at 10.40 am. She walked from her home to the shop. It took her 14 minutes to walk to the shop. Mary was at the shop for 10 minutes. Then Mary walked from the shop to her friend's house. It took Mary 22 minutes to walk to her friend's house. What time did Mary arrive at her friend's house?

**Mary leaves home (10.40) → Mary arrives at the shop (10.54)**

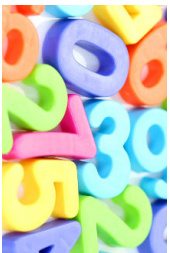
**Mary leaves the shop (11.04) → Mary arrives at her friend's house (11.26)**

2. Abdul drives from London to Sheffield. Abdul leaves London at 9.15 am. Abdul drives for  $2\frac{1}{4}$  hours before stopping for a break. The break lasts for 20 minutes. Abdul then takes another 85 minutes to reach Sheffield. What time does he arrive in Sheffield?

**Abdul leaves London (09.15) → Stops for a break (11.30)**

**Leaves from break (11.50) → Arrives in Sheffield (13:15)**

### Puzzle



Find a 10-digit number where the first digit is how many zeros in the number, the second digit is how many 1s in the number etc. until the tenth digit which is how many 9s in the number.

**6,210,001,000**



## 20.05.24

3. Here is part of a bus timetable.

Woolwich	0717	0724	0732	0739	0746
Woolwich Arsenal	0719	0726	0734	0741	0748
Plumstead Station	0725	0732	0740	0747	0754
Plumstead Corner	0730	0737	0745	0752	0759
Upper Wickham Lane	0737	0744	0752	0759	0806
Welling Corner	0743	0750	0758	0805	0813
Bexleyheath	0754	0801	0809	0817	0825
Crayford	0803	0811	0819	0827	0835
Dartford Station	0814	0823	0831	0839	0847
Darent Valley Hospital	0824	0833	0841	0849	0857
Bluewater	0828	0837	0845	0853	0901

a) A bus leaves Woolwich at 0724, how many minutes does this bus take to reach Bluewater?

**07:24 → 08:37**

**The bus takes 73 minutes.**

b) If I arrive at Crayford at 0827, what time did I depart Plumstead Station?

**07:47**

c) Jeff needs to get from Bexleyheath to Bluewater to start work at 9 am. It takes Jeff 12 minutes to walk from his house to the bus stop in Bexleyheath. It takes Jeff 8 minutes to walk from the bus station in Bluewater to his work. What is the latest time Jeff can leave his house to get to work on time?

**Jeff must catch the 0809 bus to Bluewater. Therefore the latest time he could leave home would be 07:57.**

d) Mick lives near the Upper Wickham Lane bus stop. If Mick needs to get to the hospital by 8.45, Which bus should he get to arrive in plenty of time for his appointment?

**Mick would need to get either the 0737 or 0744 to arrive in plenty of time. If he got the 0752 he would arrive 4 minutes before his appointment which is not plenty of time.**

