

# How Many Times?

Age 7 to 11

**Jay** and **Ben** (Mile Cross Middle School) sent in a correct solution:

Between midnight and 7:00 we found ten

0:12

1:23

5:43

6:54

2:34

3:45

3:21

4:32

4:56

2:10

There are no times between 7:00 and midday .  
We found two times between midday and midnight. These  
are 12:34 and 23:45.

**Syed (Foxford School and Community College) agrees with this answer and makes a statement about why you don't get times containing a 7, 8, or 9 in the solution:**

The largest the tens digit of the minute number can be is 5, so the largest unit of the hour number is 6 in order for the time to have consecutive digits.

**George (Rosebank Primary School, Leeds) also solved this one and explained his thinking well.**

**Jason (Priory Middle School, Dunstable) took a different view of this problem. Instead of only looking at single digit numbers, he also looked for consecutive two-digit numbers. This is what he found:**

| For midnight to 7am | For 7am to midday | For midday to midnight |       |
|---------------------|-------------------|------------------------|-------|
| 1:23                | 10:11             | 12:13                  | 23:22 |
| 2:34                | 11:12             | 13:14                  | 22:21 |
| 3:45                | 11:10             | 14:15                  | 21:20 |
| 4:56                |                   | 15:16                  | 20:19 |
| 2:10                |                   | 16:17                  | 19:18 |
| 3:21                |                   | 17:18                  | 18:17 |
| 4:32                |                   | 18:19                  | 17:16 |
| 5:43                |                   | 19:20                  | 16:15 |
| 6:54                |                   | 20:21                  | 15:14 |
|                     |                   | 21:22                  | 14:13 |
|                     |                   | 22:23                  | 13:12 |
|                     |                   | 23:24                  | 12:11 |
|                     |                   | 0:23                   |       |