Time (Junior UKMT)

These questions must be attempted ***without a calculator***

Topics covered in the questions below may not necessarily be from the topic of the title.

1. My train was scheduled to leave at 17.42 and to arrive at 18.17. However, it started four minutes late, and the journey took 43 minutes.

At what time did I arrive?

A 18.21   B 18.23   C 18.25   D 18.27   E 18.29

2. Sir Isaac Newton, the English mathematician, physicist and discoverer of the laws of gravity, was born in Woolsthorpe, Lincolnshire in 1642, the same year that Galileo, the Italian scientist, died.

In the year 2000, how many years ago was that?

A 351   B 358   C 368   D 424   E 442

3. Humpty Dumpty sat on a wall, admiring his new digital watch which displayed hours and minutes only. He noticed that it was 15:21 when Jack and Jill set off up the hill, but that when they later came tumbling down again his watch showed only 10:51. At that point Humpty realised that he'd had his watch on upside down all the time!
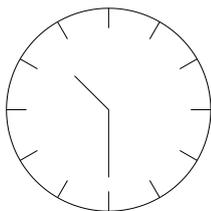
How long did Jack and Jill take to go up the hill and down again?

A 40min   B 2hr 10min   C 2hr 20min   D 3hr 10min   E 4hr 30min

4. Gollum eats fish on alternate days. How often does he eat fish on a Monday?

A Twice a day   B Once a week   C Once a fortnight

D Once a month   E Once a year

5. A wall clock (with hour marks, but no numbers) shows the time as half past ten. If the clock is seen reflected in a vertical mirror, what time would it appear to show?

A half past one   B 4 o'clock   C 2:30

D eight hundred hours   E just gone 7 minutes past six

6. Tick's watch runs 2 minutes per hour too slow. Tock's watch runs 1 minute per hour too fast. They set them to the same time at noon on Sunday. The next time they met, one of the watches was one hour ahead of the other.

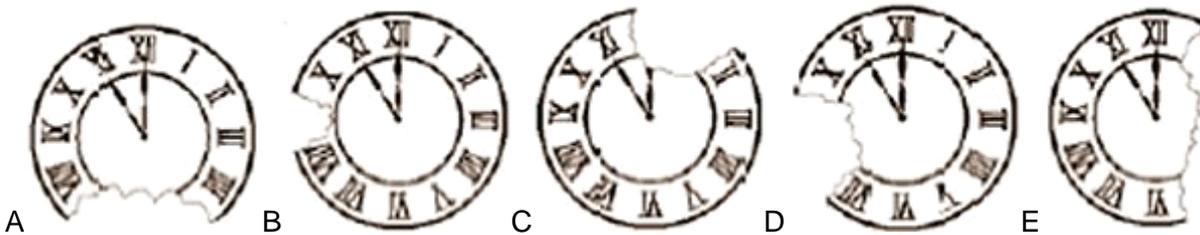What was the earliest time this could have been?

A 8 am on Monday   B 7:20 pm on Monday   C 4 am on Tuesday

D midnight on Wednesday   E 10 pm on Saturday

7. A newspaper reported last year that marine experts at the Sea Life Centre in Brighton were teaching an octopus to open jam jars to get at food as a way of stopping it becoming bored. Assuming that it can open four jars simultaneously and that each jar takes 30 seconds to open, how many jars can the octopus open per hour?

A 30   B 120   C 240   D 480   E 960

8. Horatio the hamster likes to eat parts of clock faces.

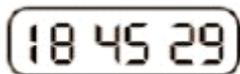In which of these clock faces has the largest sum of numbers been eaten?

A   B   C   D   E

9. The Grand Old Duke of York, he had ten thousand men, he marched them up to the top of the hill, ... By 2pm they were one third of the way up. By 4pm they were three quarters of the way up.

When did they set out?

A 12 noon   B 12.24pm   C 1.12pm   D 1.36pm   E 1.48pm

10. On a digital clock displaying hours, minutes and seconds, how many times in each 24-hour period do all six digits change simultaneously?

A 0   B 1   C 2   D 3   E 24