

1. Anna has 3 brothers and 5 sisters. Her brother Tom has S sisters and B brothers.

What is the value of $S \times B$?

2. The time shown on a digital clock is 05:55.

How many minutes will pass before the clock next shows a time for which all the digits are the same?

3. The square of a positive number is twice as big as the cube of that number.

What is the number?

4. Albert Einstein was standing on the station platform when he noticed that he could see two station clocks. Each clock was digital, showing only hours and minutes.

He observed that the display on one clock changed to the next minute 10 seconds before the correct time, whereas the display on the other clock changed to the next minute 10 seconds after the correct time.

For what fraction of the day did the clocks show the same time?



5. A digital clock uses two digits to display hours, two digits to display minutes and two digits to display seconds, e.g. 10:23:42.

How many times between 10:00:00 and 11:00:00 on the same morning are all six digits different?

