

## Pi Math Contest - Euler Division

### Sample Problems

1. Find the remainder when 2018 is divided by 11.
2. Andrew is 4 times as old as his sister Phoebe. In 2 years, he will be twice as old as Phoebe. How old was Andrew when Phoebe was born?
3. In an acute triangle, the three angles form an arithmetic sequence. Also, one of the angles, in degrees, is a perfect cube. What is the difference of the largest and smallest angles in the triangle, in degrees?
4. Alpha Math Contest has 25 questions. Each correct answer is worth 10 points and each blank answer is worth 1 point. No points are given for incorrect answers. If Brandon scored 124 points, at least how many incorrect answers did he have?
5. Alpha the Penguin will take a shortest path in a grid from  $(0,0)$  to  $(4,2)$  but she has to avoid a sea lion at  $(2,1)$ . How many different shortest paths can she take?