Math Circle 8/27/2016 Meeting: Warm-up problems

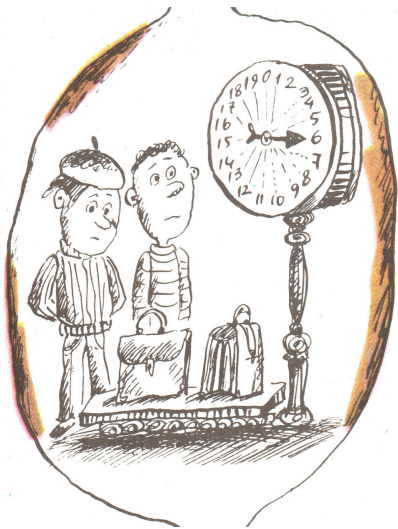(Source: A Moscow Math Circle: Week-by-Week Problem Sets)

Problem 1. Grandma takes five minutes to climb from the first floor of a building to the fifth. If she climbs at the same speed, how long will it take her to get to the ninth floor from the first?

Problem 2. Juan and Candice are using a spring scale to weigh their book bags. When they are weighed separately, the scale shows 3lbs and 2lbs. When they weigh them together, the scale shows 6 lbs.

"That can't be right," said Candice. "Two plus three doesn't equal six!"

"Don't you see?" answered Juan. "The pointer on the scale is off."

How much do the book bags actually weigh?

Problem 3. A group from a summer camp leaves a forest where they have been gathering flowers. They walk in boy-girl pairs, and in each pair the boy has either three times as many or one third as many flowers as the girl has. Is it possible for the whole group to have 506 flowers?