Problem of the Week

Problem B

Trivia Night Treats

Mr. Mcbride is hosting a Grade 5 and 6 trivia night. The students will be divided into teams of equal size. He has 90 individually-wrapped candies to distribute to the winning team.

(a) What reasonable team sizes between 4 and 20 could Mr. Mcbride allow to ensure that all members of the winning team get an equal number of candies and there are no candies leftover?

(b) After the trivia night a winning team is declared! Each student on the winning team gets an equal number of candies, with no candies leftover. They then each eat $\frac{2}{3}$ of their share, leaving exactly 5 candies per student. How many students were on the winning team?

(c) The students on the winning team put all their remaining candies together, give $\frac{2}{5}$ to a friend on another team, then give the rest back to Mr. Mcbride to say thank you for hosting the trivia night. What fraction of his original 90 candies did Mr. Mcbride receive as a thank you? Give your answer in the simplest form.



Theme: Number Sense