

MathCounts Problem of the Week: Apples, Apples, Apples

Assignment: There are many questions here to solve. Think deeply, be persistent and solve everything asked. Write up your solution to all problems, showing your work and explaining your thinking.

Due: _____



The Problems:

The Farmers Market sells apples by the bushel, and each bushel of apples weighs 42 lbs. A bushel of large apples contains 84 apples. If a bushel of small apples contains twice as many apples as a bushel of large apples, how many small apples are in 1 lb of apples?

Megan purchased a bushel of apples from the Farmers Market that contained only large and small apples. There were exactly 129 apples in the bushel Megan purchased. Based on this and information from the previous problem, what is the positive difference between the number of large apples and the number of small apples in the bushel of apples Megan purchased?

Megan used 18 of the large apples she purchased to make a few batches of apple sauce. She used $4\frac{1}{2}$ lbs of small apples to make two apple pies. Megan used $\frac{1}{3}$ of the remaining small apples to make several batches of apple butter. After making the apple sauce, apple pies and apple butter, Megan saved the leftover apples for the upcoming harvest festival. In the apples that Megan had left over what is the ratio of large apples to small apples? Express your answer as a common fraction.