



# Math Fundamentals PoW

The Math Forum's Problems of the Week provide non-routine constructed response problems. The Math Fundamentals problems target concepts typically learned in grades 3-5. Memberships and mentoring options are available at the individual, class, school, and district levels.

## Marble Mayhem - posted March 17, 2008

Fred, Ginger, Julio and Dawn decided to play marbles. Fred emptied his bag of marbles and divided them equally among the four players. Everyone got at least one marble. There was one marble left over.

At that moment Jake arrived and asked to play. They gathered up all Fred's marbles and divided them equally among the five kids. There was still one marble left over.

Just then Maria joined them, so they gathered all the marbles again and divided them equally six ways. There was still one marble left over.

What is the fewest number of marbles that Fred could have had in his bag?



**Extra:** What is the fewest number of marbles Fred could have had in his bag if Dawn had not been there at all? How did your answer compare with your original answer? Why do you think that is so?