



Problem of the Week

Problem A

Charity Chocolate Cake

Sam's class is having a bake sale. Sam wants to make cakes with his mom for the fundraiser. Their oven can only fit one cake at a time.

There are four steps to make one cake.

Step 1: Mix the batter. This takes 10 minutes.

Step 2: Bake the cake. This takes 35 minutes.

Step 3: Let the cake cool for 15 minutes.

Step 4: Frost the cake. This takes 10 minutes.

- (a) How long does it take to make one cake from start to finish?
- (b) Sam wants to bake two cakes for the bake sale. He starts making the second cake immediately after frosting the first cake. If they need to leave for the bake sale by 4:00 p.m., what is the latest possible time that Sam can start making the first cake?

EXTENSION: You may have noticed that you can make two cakes faster by mixing the batter for the second cake while the first cake is baking, and putting the second cake in the oven immediately after taking the first cake out. Then you can cool and frost the first cake while the second cake is baking. How long would it take from the time you start mixing the batter for the first cake until you finish frosting the second cake with this plan?

