



Problem of the Week

Problem A and Solution

Colossal Cake

Problem

Jose's 12th birthday is coming up and his family is having all of their friends and neighbours over for the party. They ordered a colossal cake from the bakery for the celebration. The mass of the cake, including the icing and the tray, is 5 kg. The tray has a mass of 400 grams.

- (a) What is the mass of the cake and the icing without the tray?
- (b) If the icing has a mass of 1350 grams, what is the mass of the cake without the icing or the tray?

Solution

To solve this problem, it would be easier if all of the amounts were described with the same units. Since the mass of the tray and the icing are in grams, we could convert the total mass to grams as well. Since 1 kg is equal to 1000 grams, the total mass is $5 \times 1000 = 5000$ grams.

- (a) The mass of the cake and the icing without the tray is
 $5000 - 400 = 4600$ grams.
- (b) The mass of the cake without the icing or the tray is
 $4600 - 1350 = 3250$ grams.