



## Problem of the Week

### Problem D

#### Time for Cake

Finn and Lea own a cake business. Finn does all the baking while Lea does all the decorating. One day they need to complete five cake orders. The order in which they complete the cakes doesn't matter, however all cakes need to be baked before they can be decorated. A cake can be decorated at any time after it has been baked. Also Finn and Lea can each work on only one cake at a time.

The times to bake and decorate each of the cakes are shown in the table below.

Order Number	Cake Type	Baking Time (min)	Decorating Time (min)
1	Carrot Cake	50	20
2	Vanilla Birthday Cake	30	60
3	Strawberry Cheesecake	70	40
4	Rainbow Layer Cake	100	90
5	Angel Food Cake	80	10

If Finn and Lea start working on these orders at 9:30 a.m., what is the earliest time that they can be completely finished all five cakes? Justify your answer.

