MAT 365 Fall 2002 Extra credit Name:

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Hours: MWF 11:20 – 12:20 MW 1:40 – 2:40

The cake problem

Today is our one-year-old kid's birthday. There is a cake to share with a candle in the middle of the cake. We would like to avoid the fight over the differently shaped pieces, so we try to cut the cake into congruent pieces. After removing the candle we notice that the middle of the cake became dirty. The children won't eat any dirty pieces it's up to grandpa to finish those. So we have to create some pieces which were in no contact with the candle. Of course this is a fancy layer cake so cuts need to be vertical but we are allowed to use curly cuts. Can we do it?