

B Solutions to Problems

Solution to Problem 1. We can model this problem as a dynamic program with the following longest path representation:

- Stage t represents considering how many type t cakes to bake:
 - $t = 1 \leftrightarrow$ pound cake
 - $t = 2 \leftrightarrow$ angel food cake
 - $t = 3 \leftrightarrow$ end of decision-making process
- Node t_{n_1, n_2} represents having n_1 remaining eggs and n_2 remaining cups of flour at stage t ($n_1 = 0, 1, \dots, 48; n_2 = 0, 1, \dots, 32$)

