

**INTEGRATED MATH 2**Systems of Equations and Graphing Inequalities Assessment  
Linear Programming**COMPUTER PRODUCTION**

Imagine that you are running a small business that assembles and sells two types of computers: Model A (the business version) and Model B (the personal version). You are only able to manufacture 360 computers in a given week and you want to find out how many of each model to produce each week to maximize your profit.

The following table shows all the relevant data concerning the employees at your company:

Job Title	Number of people doing this job	Job description	Pay	Hours worked
Assembler	100	This job involves putting the computers together	\$500 per week	36 hours per week
Inspector	4	This job involves testing and correcting and faults in the computers before they are sold	\$600 per week	35 hours per week

The next table shows all the relevant data concerning the production of the outfits:

	Model A	Model B
Total assembly time in man-hours for each computer	12	6
Total inspection and correction time in man-minutes for each computer	10	30
Component costs for each computer	\$400	\$320
Selling price for each computer	\$600	\$440

**OBJECTIVE:** To determine how many of each model to produce that will maximize your profits and then make a detailed presentation to the board of directors thoroughly explaining how you reached your solution.