

Printing Books

NAME _____

Purchasing decisions for an algebra textbook for the school system must be made. The Board of Education needs to know the cost of providing a 325-page algebra textbook to three different schools. The schools have agreed to pilot a new textbook this year; the publisher is making page proofs of the book available, but the schools are responsible for making the actual copies needed for all students. An assistant has done some research and has discovered the following three possibilities:

- **Local Printing Company:** The algebra textbook can be printed by a local printer for a cost of \$9.50 per book with an initial cost of \$5,000 for typesetting.
- **Local Copy Center:** The textbook can be duplicated at a local copying center for \$0.05 per page plus \$2.00 per book for binding.
- **School District:** The copying center within the school district can print the textbook at a cost of \$0.035 per page plus an initial cost of \$3,000 for typesetting.

In the past, algebra textbook orders have never exceeded 2,250 books, and the cost has never exceeded \$35,000. Using the tools listed below, do a mathematical analysis of these three different options and write a recommendation for the Board of Education to consider.

- **Algebraic equations** to represent each option
- **Tables and graphs** using these algebraic equations
- **Slopes, y-intercepts, and points of intersection** that appear on the graphs