**Subject area/course**: Mathematics

**Grade level/band**: 8

**Task source**: New Hampshire Task Bank; Author: Deborah Dyer

**Printing Yearbooks**

**STUDENT INSTRUCTIONS**

1. **Task context**:

A school’s yearbook club needs to hire a company to print yearbooks for the 2016-2017 school year. Help the yearbook club determine the best choice.

1. **Final product**:

Below is a list of four companies and their pricing for a Basic Yearbook and an Enhanced Yearbook. Work with a partner to analyze the information given. Narrow down your choices to three. Consider the ideas generated during the brainstorm session when thinking about your top three choices.

*Note: If Internet is available, consider the pricing of these yearbook companies.*

Entourage Yearbooks

Website: <http://www.entourageyearbooks.com/YearbookPrices.asp>

TreeRing

Website: <https://www.treering.com/Yearbook-Pricing>

Basic (B): Soft cover

Maximum of 100 pages

Full color

Enhanced (E): Hard cover

Maximum of 150 pages

Full color

Personalized cover

Autograph supplements (5 extra pages for messages)

Stickers to personalized pages

Fold outs

|  |  |  |
| --- | --- | --- |
| **Company** | **Type** | **Cost** |
| FunBooks | Basic | $25 per yearbook |
| Yearbooks Central | Basic | a flat rate of $3,000, regardless of the number of yearbooks sold |
| Memory Lane Yearbooks | Basic | $20 per yearbook with an initial $500 printing cost |
| MyLife Yearbooks | Basic | $12 per yearbook with an initial $1,020 printing cost |
| Yearbooks Central | Enhanced | a flat rate of $5,000, regardless of the number of yearbooks sold |
| Memory Lane  Yearbooks | Enhanced | $35 per yearbook with an initial $1,600 printing cost |
| LifeTime  Yearbooks | Enhanced | $40 per yearbook with an initial $800 printing cost |

Which option should the yearbook club choose? Show evidence to support your answer.

Consider these questions before you begin:

1. What information/resources do you need to solve this problem?
2. How can you find an answer to this question using algebraic reasoning?
3. What mathematical models could you create to support your answer?

In your final product, include a presentation explaining the best option the yearbook club should choose. Cite evidence when justifying the option. Use a chart paper to show mathematical calculations and representations (algebraic, and graphical) that justify the option. You may include table of values in your work.

**Additional Information**

1. **Knowledge and skills you will need to demonstrate on this task:**

* Solutions to systems of equations corresponds to points of intersection of their graphs
* Write systems of linear equations
* Solve a system of equations graphically and algebraically
* Solve real-world problems leading to two linear equations in two variables

1. **Materials needed:**

* Calculators
* Graph paper
* Rulers
* Tools to access internet if available

1. **Time requirements:**

This task will take approximately 90-180 minutes to complete. Your teacher will provide specific instructions regarding the task timeline.

1. **Scoring:**

Your work will be scored using the Printing Yearbooks Performance Task Rubric. You should make sure you are familiar with the language that describes the expectations for proficient performance.