Back-to-School Shopping Plan — Teacher Guide

Financial Algebra · Unit 11: Percents & Consumer Math

2 class periods | Pairs | Skills: Skill 1, Skill 2, Skill 3, Skill 4

Overview

Every August, stores compete with sales, coupons and “bonus” deals. Your team will plan the Rivera family’s back-to-school shopping, compare three stores, check unit prices, and recommend where to buy each item so the total stays under $350 including 6.25% sales tax.

Skills covered

- Calculate discounts and sale prices (consumer-skill-01)
- Apply sales tax, tips and fees (consumer-skill-02)
- Find percent change and markups (consumer-skill-03)
- Compare unit prices and deals (consumer-skill-04)

Required materials

- Student packet
- Calculators or a spreadsheet
- Store flyers (optional)

Suggested pacing

Session	Focus
Day 1	Tasks 1–2
Day 2	Tasks 3–5

Implementation guidance

- Tax is charged after discounts at all three stores.
- Store C’s gift card arrives after the purchase, so it does not lower what the family pays today.

Worked calculations

Task 1

1. Subtotal $361.60.
2. Store A: $361.60 × 0.80 × 1.0625 = $307.36.
3. Store B: ($361.60 − $25) × 1.0625 = $357.64.
4. Store C: $361.60 × 1.0625 = $384.20 today; gift card $38.42, an effective $345.78 only if the card is used.

Task 2

1. 12 pens: $0.45 each; 24 pens: $0.40 each; 60 pens: $0.35 each.
2. One student: the 24-pack (enough, little waste). A class of 25: the 60-pack is cheapest per pen.

Task 4

1. Store A total $307.36 is under $350, leaving $42.64 (12.2% of the budget).

Sample student responses

> "Store A saves the most today: $307.36 versus $357.64 at Store B. Store C's gift card is worth $38.42, but it only helps if we shop there again next month."

Common misconceptions

- Applying tax before the discount.
- Treating a future gift card as money off now.
- Assuming the biggest package is always best.

Differentiation

Support

- Give a store-total template with the multipliers filled in.

Extend

- Write a function for each store's total and find the subtotal where Store A and Store B cost the same.

Extension opportunities

- Compare real flyers from two local stores.

100-point rubric

Category (points)	Exemplary (100%)	Proficient (~80%)	Developing (~60%)	Beginning (~30%)
Financial understanding (20)	Uses vocabulary precisely and explains every financial concept involved, including assumptions.	Mostly accurate explanations with minor vocabulary gaps.	Partial understanding; some concepts misapplied.	Little evidence of understanding.
Mathematical accuracy (25)	Discounts, tax and unit prices correct; multipliers used.	1–2 minor errors that do not change conclusions.	Several errors or missing work.	Calculations largely missing or incorrect.
Analysis & comparison (20)	Compares every option on the same basis and tests at least one changed assumption.	Compares options with small gaps.	Comparison superficial or uneven.	Little analysis.
Justification (15)	Recommendation is supported by specific numbers and weighs non-financial factors and risks.	Mostly supported.	Mostly opinion.	No justification.
Communication & presentation (10)	Clear, organized, well-labeled tables, charts, and writing.	Minor clarity issues.	Hard to follow in places.	Disorganized.
Completion (10)	Every checklist item complete.	One item missing.	Two or three items missing.	Most items missing.

Total: 100 points. Alternative recommendations earn full credit when supported by accurate evidence.

Student documents (reference)

Shopping list (regular prices, fictional)

Item	Qty	Price each	Line total
Notebooks (10-pack)	2	$12.50	$25.00
Graphing calculator	1	$118	$118.00
Backpack	1	$54	$54.00
Pens (24-pack)	1	$9.60	$9.60
Sneakers	1	$79	$79.00
Hoodie	2	$38	$76.00
Subtotal			$361.60

Bulk pens (unit prices)

Package	Price
12 pens	$5.40
24 pens	$9.60
60 pens	$21.00