THE BARATELLI INSTITUTE · **MENTORING AT SCALE**

Money *Smarts.*

Markup, markdown, interest, and the business of money.

Aligns to: proportional relationships, percent problems, and simple interest (Grade 7 ratios & proportional relationships); pricing, banking, credit vs. debit, and saving (personal finance).

Grade 7 · Ages 12–13

1. Percent Increase & Decrease
2. Markup: Cost to Price
3. Markdown: the Sale Price
4. Commission
5. Simple Interest
6. Debit vs. Credit
7. Compare Two Bank Accounts
8. Pay Yourself First

Project — Run a Small Business Stand

A free classroom tool · baratelliinstitute.com

How to use this packet

These build proportional reasoning into real money: percent change, markup and markdown, commission, and simple interest, plus a first look at credit vs. debit and choosing a bank.

1. Percent Increase & Decrease	Percent change.
2. Markup: Cost to Price	Retail markup.
3. Markdown: the Sale Price	Sale pricing.
4. Commission	Pay tied to sales.
5. Simple Interest	I = Prt.
6. Debit vs. Credit	Two kinds of cards.
7. Compare Two Bank Accounts	Interest minus fees.
8. Pay Yourself First	Saving a set percent.

The project. In the project, students run a small business stand — setting cost, markup, and price, then projecting revenue, commission, and profit. It pulls the skills together into one real-world task — assign it as a capstone, group work, or homework. **Print in black-and-white, single-sided.** Most worksheets take 15–20 minutes; the answer key with concept notes and differentiation tips is at the back.

LEARN IT FIRST

The ideas behind this packet

Meet Diego, who runs a small sneaker table and learns the math of buying and selling. Read the story once, then the worksheets will make sense — the answers will be things you were *taught*, not things you had to guess.

Diego's sneaker table

Start with the basics: money is **earned**, and a **percent** is just a part out of 100. When you keep money in the bank, it pays you **interest** — extra money for saving. Diego puts those ideas to work running a sneaker table.

He buys sneakers wholesale at a **cost** of $30 a pair and sells at a **markup** of 60%, so his price is $30 × 1.60 = $48. A slow week, so he runs a **markdown** — 30% off — dropping a $48 pair to $33.60. His friend Sam works the table for a 10% **commission**: sell $200 of sneakers, earn $20. Diego keeps his profit in a savings account paying **simple interest** — Interest = Principal × rate × time — so $1,000 at 5% for 3 years earns $150. He pays suppliers with a **debit card** (his own money), but a **credit card** is different: it borrows the bank's money, which he must pay back, with extra interest if he doesn't repay in full.

KEY TERMS IN THIS STORY

Earn & percent — money is earned; a percent is a part out of 100

Markup — the amount added to cost to set the selling price

Markdown — a percent taken off the price — a sale

Commission — pay equal to a percent of what you sell

Simple interest — Interest = Principal × rate × time

Debit vs. credit — your money now vs. the bank's money to repay

LESSON

Percent change, markups, and markdowns

Money is earned, and a percent is a part out of 100. Stores use percents to set and cut prices.

Percent change

How much a number rose or fell, as a percent of the original: change ÷ original. **Example:** $40 → $50 is $10 ÷ $40 = **25% up**.

Markup

Stores buy at a cost and sell higher: price = cost × (1 + markup). **Example:** $30 cost, 60% markup → 30 × 1.60 = **$48**.

Markdown

A sale is a percent off the price: sale price = price × (1 − markdown). **Example:** $90 at 30% off = **$63**.

Now practice → the Percent Increase & Decrease, Markup, and Markdown worksheets.

Name: _____ Date: _____

1. Percent Increase & Decrease

> *Change ÷ original × 100 = percent change. Or apply a change with ×(1 ± rate).*

Example — $50 increased 20% = 50 × 1.20 = **$60**.

a) $50 increased by 20% = ☐

b) $80 decreased by 15% = ☐

c) A price rose from $40 to $50. Percent increase = ☐

Name: _____ Date: _____

2. Markup: Cost to Price

> *Stores buy at cost and sell higher. Price = cost × (1 + markup).*

a) A shirt costs the store $30; they mark it up 60%. Selling price = ☐

b) A bike costs $120; marked up 35%. Selling price = ☐

Name: _____ Date: _____

3. Markdown: the Sale Price

> *A markdown is a percent off the price. Sale price = price × (1 − markdown).*

a) A $90 coat, 30% off. Sale price = ☐

b) A $45 game, 40% off. Sale price = ☐

LESSON

Getting paid and earning interest

There's more than one way to be paid — and money in the bank earns money too.

Commission

Pay equal to a percent of what you sell, sometimes plus a base pay. **Example:** 6% of $25,000 in sales = **$1,500**.

Simple interest

The reward for saving (or the cost of borrowing): Interest = Principal × rate × time. **Example:** $1,000 at 5% for 3 years = 1,000 × 0.05 × 3 = **$150**.

Now practice → the Commission and Simple Interest worksheets.

Name: _____ Date: _____

4. Commission

> *Many salespeople earn a percent of what they sell, sometimes plus a base pay.*

a) 6% commission on $25,000 of sales = ☐

b) $400 base pay + 10% on $8,000 in sales *(find the commission first, then add the base)* =

☐

Name: _____ Date: _____

5. Simple Interest

> *Interest is the cost of borrowing or the reward for saving. Use the formula below.*

SIMPLE INTEREST

$$I = P \times r \times t \quad \text{(Principal} \times \text{rate} \times \text{time in years)}$$

a) $1,000 at 5% for 3 years. Interest = ☐

b) $2,500 at 4% for 2 years. Interest = ☐ Final balance = ☐

LESSON

Banking, cards, and saving

Where you keep money — and how you pay — matters.

Debit vs. credit

A **debit** card spends your own money now. A **credit** card borrows the bank's money, which you must pay back — with interest if you don't pay in full.

Choosing a bank

Interest helps you; fees hurt. Compare the net: interest earned − fees. **Example:** 3% on $2,000 = $60, minus $48 in yearly fees = **$12 net**.

Pay yourself first

Save a set percent of every dollar before spending. **Example:** 15% of $1,200 = $180 a month, or **$2,160 a year**.

Now practice → the Debit vs. Credit, Compare Two Bank Accounts, and Pay Yourself First worksheets.

Name: _____ Date: _____

6. Debit vs. Credit

> *Two cards, two very different things. Read each, then answer.*

	Debit card	Credit card
Whose money?	Yours, right now	Borrowed from the bank
Pay it back?	No — already paid	Yes — or pay interest
Builds credit?	No	Yes, if paid on time

a) You have $20 and want a $30 item. Which card lets you buy it — and what is the risk?

_____

b) Why can a credit card cost more than the sticker price?

_____

Name: _____ Date: _____

7. Compare Two Bank Accounts

> *Interest helps; fees hurt. Find the net (interest earned minus fees) on a $2,000 balance for one year.*

Account	Interest	Monthly fee
Account A	3% per year	$4
Account B	2% per year	$0

Account A: interest [ ] − fees [ ] = net [ ]

Account B: interest [ ] − fees [ ] = net [ ] Better account: _____

Name: _____ Date: _____

8. Pay Yourself First

> *Smart savers take savings out before spending. Save a set percent of every dollar earned.*

a) You earn $1,200 a month and save 15%. Monthly savings = ☐

b) How much is that after 12 months? ☐

c) Name one way to make sure you actually save it each month.

_____

CAPSTONE PROJECT · GRADE 7

Run a Small Business Stand

You're starting a stand — lemonade, baked goods, friendship bracelets, your call. You'll set your costs, choose a markup, price your product, and figure out your profit.

Step 1 — Costs and price

What are you selling? _____

Your **cost** to make one = [ ] Markup you choose = _____ % **Selling price** = [ ]

Step 2 — Project your sales

If you sell _____ units, your **revenue** = price × units = [ ]

Your **total cost** = cost × units = [ ] **Profit** = revenue − cost = [ ]

Step 3 — Hire a helper on commission

You pay a friend 10% commission on what they sell. If they sell $40 worth, you pay them [ ].

Does adding the helper still leave you a profit? Show the new numbers.

Step 4 — One decision

Would you raise your price, lower your cost, or sell more? Explain using your numbers.

Teacher’s Answer Key & Concept Notes

1. Percent Increase & Decrease — a) $60 b) $68 c) 25% increase (10 ÷ 40).

Differentiate: Support: apply the change as ×1.2 / ×0.85. Challenge: a price that drops 15% then rises 15% — back to start? (No.)

2. Markup: Cost to Price — a) $48 b) $162.

Differentiate: Support: find the markup dollars first. Challenge: work backward — price $48 from a 60% markup means what cost?

3. Markdown: the Sale Price — a) $63 b) $27.

Differentiate: Support: find the savings, then subtract. Challenge: a 30%-off then extra 10%-off price.

4. Commission — a) $1,500 b) $1,200.

Differentiate: Support: commission only first. Challenge: what sales total earns $2,000 at 6%?

5. Simple Interest — a) $150 b) interest $200, balance $2,700.

Differentiate: Support: write P, r, t before multiplying. Challenge: how many years for $1,000 at 5% to earn $250?

6. Debit vs. Credit — a) Credit; risk = debt + interest if not repaid. b) interest is charged on unpaid balances.

Differentiate: Support: read the table aloud. Challenge: when is a credit card the smarter choice? (build credit, pay in full).

7. Compare Two Bank Accounts — A: $60 − $48 = $12. B: $40 − $0 = $40. Account B.

Differentiate: Support: fees = $4 × 12. Challenge: at what balance does A finally beat B?

8. Pay Yourself First — a) $180 b) $2,160 c) automatic transfer on payday.

Differentiate: Support: 10% then half. Challenge: at 15%, how long to save $5,000?

P. Project — Run a Small Business Stand — Open — price = cost × (1+markup); profit = revenue − total cost − commission.

Differentiate: Support: start with 5 units sold. Challenge: find the break-even number of units.