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# CONSUMER MATH LIFE-SKILLS WORKBOOK

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Grades 8 – 10

*Real-World Math for Everyday Life*

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| <br>Grocery Budgeting | <br>Rent vs. Buy | <br>Car Costs |
| <br>Utility Bills     | <br>Tipping      | <br>Sales Tax |

**INCLUDES:**

- ✓ 50-Page Student Workbook
- ✓ Complete Teacher Answer Key
- ✓ 6 Real-Life Scenario Projects
- ✓ Pacing Guide

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# Welcome!

## Consumer Math Life-Skills Workbook

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### Dear Educator,

Thank you for choosing this resource! This workbook bridges the gap between abstract math and the real-world financial decisions your students face every day. Six comprehensive units cover grocery budgeting, housing, car ownership, utility bills, tipping, and sales tax.

**Unit 1:** Grocery Budgeting — Unit pricing, coupons, meal planning

**Unit 2:** Rent vs. Buy — Housing costs, mortgages, comparisons

**Unit 3:** Car Costs — Loans, insurance, fuel, total ownership

**Unit 4:** Utility Bills — Reading meters, calculating charges

**Unit 5:** Tipping — Restaurant etiquette, splitting bills

**Unit 6:** Sales Tax — Rates, exemptions, total purchase price

■ **PRINTING NOTE:** Print double-sided. Blank space is intentional for student work. Project pages may be printed separately.

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# Pacing Guide

Recommended 8-Week Schedule (45-min periods, 3-4 days/week)

| Week | Unit / Section                | Focus                            | Pages |
|------|-------------------------------|----------------------------------|-------|
| 1    | Unit 1: 1.1-1.2               | Unit price, comparisons, coupons | 5-8   |
| 2    | Unit 1: 1.3-1.4               | Meal planning, receipts, review  | 8-10  |
| 3    | Unit 2: 2.1-2.3               | Rent, buying, compare & review   | 11-14 |
| 4    | Unit 3: 3.1-3.2               | Auto loans, insurance, fuel      | 15-17 |
| 5    | Unit 3: 3.3 + Unit 4: 4.1     | TCO, review, electric bills      | 18-20 |
| 6    | Unit 4: 4.2-4.3               | Water, gas, conservation, review | 20-22 |
| 7    | Unit 5: 5.1-5.2 + Unit 6: 6.1 | Tipping, splitting, sales tax    | 23-27 |
| 8    | Unit 6: 6.2 + Projects        | Big purchases, review, projects  | 27-34 |

■ **ASSESSMENT TIP:** Each unit review = formative assessment. Real-Life Scenario Projects = summative. Assign one or let students choose!

## UNIT 1

## Grocery Budgeting

Master unit pricing, coupons, and meal planning.

## ■ Key Vocabulary

|                   |                                                                 |
|-------------------|-----------------------------------------------------------------|
| <b>Unit Price</b> | Cost per standard unit of measure (e.g., per ounce, per pound). |
| <b>Budget</b>     | A plan for how to spend money over a set period.                |
| <b>Coupon</b>     | A voucher giving a discount on a specific product.              |
| <b>BOGO</b>       | Buy One Get One — buy one, get another free or discounted.      |
| <b>Sale Price</b> | A temporary reduction from the regular price.                   |

## ■ 1.1 Unit Price & Comparisons

The **unit price** tells you the cost per standard unit, making it easy to compare brands and sizes. Divide total price by number of units.

### Worked Example

**Brand A:** 16 oz for \$3.20 →  $\$3.20 \div 16 = \$0.20/\text{oz}$

**Brand B:** 24 oz for \$4.56 →  $\$4.56 \div 24 = \$0.19/\text{oz}$

Brand B is the better deal.

■ **KEY FORMULA:** Unit Price = Total Price ÷ Number of Units. Always compare the same unit of measure!

## —■ Practice: Unit Price Comparisons

1. Juice A: \$2.49 for 64 oz. Juice B: \$1.99 for 48 oz. Which is the better buy per ounce?

\_\_\_\_\_

2. Pasta A: 16 oz for \$1.28. Pasta B: 32 oz for \$2.24. Which is cheaper per ounce?

\_\_\_\_\_

3. Detergent: 80 oz for \$7.20 vs 120 oz for \$9.60. What is the unit price of each?

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4. Peanut butter: 28 oz for \$4.48 vs 40 oz for \$6.80. Which saves more per ounce?

\_\_\_\_\_

5. Coffee: 12 oz for \$5.40 vs 24 oz for \$11.04 vs 36 oz for \$14.40. Rank best to worst value per ounce.

\_\_\_\_\_

6. Dog food: 15 lb for \$22.50 vs 30 lb for \$39.90. Price per pound for each? Which is better?

\_\_\_\_\_

## UNIT 1

## Grocery Budgeting

## 1.2 Budgeting &amp; Coupons

**Worked Example: Using Coupons**

Maria's list totals \$67.50. Coupons: 20% off one \$8.00 item (saves \$1.60), \$0.75 off bread, BOGO on yogurt at \$1.25 each buying 3 (saves \$1.25). Total savings:  $\$1.60 + \$0.75 + \$1.25 = \$3.60$ . New total: **\$63.90**.

⇒ **Practice: Budgeting & Coupons**

1. Weekly budget \$85, spent \$52.40. How much remains?

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2. Monthly budget \$450. Week 1: \$112.35, Week 2: \$98.72, Week 3: \$105.18. How much for Week 4?

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3. 15% off \$89.60 purchase. What is the discount and final price?

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4. BOGO sale: Cereal \$3.99 each, buy 3 boxes. What is the effective price per box?

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5. Buy: milk \$3.49, eggs \$2.79, bread \$2.49, chicken \$6.99, rice \$1.99, apples \$3.29. Total? If 3% tax on chicken and rice only, what is the final total?

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6. Loyalty card: 5% off \$134.20 purchase. What do you pay?

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**1.3 Meal Planning Challenge**

Plan 3 days of meals using the price list below. Budget: **\$75** for 7 days (21 meals). Stay within budget!

| Item          | Price  | Item               | Price  |
|---------------|--------|--------------------|--------|
| Milk (1 gal)  | \$3.49 | Chicken (1 lb)     | \$4.99 |
| Eggs (dozen)  | \$2.79 | Ground beef (1 lb) | \$5.49 |
| Bread         | \$2.49 | Rice (2 lb)        | \$2.99 |
| Pasta (1 lb)  | \$1.29 | Pasta sauce        | \$2.79 |
| Apples (1 lb) | \$1.99 | Bananas (1 lb)     | \$0.69 |
| Cheese (8 oz) | \$3.49 | Yogurt (6-pk)      | \$3.96 |
| Peanut butter | \$2.98 | Cereal             | \$3.99 |
| Lettuce       | \$1.99 | Frozen veggies     | \$1.99 |

**My Shopping List & Costs:**

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Total: \$ \_\_\_\_\_ Remaining: \$ \_\_\_\_\_ Within budget? \_\_\_\_\_

■ Reading a Receipt

| Item               | Qty | Price  | Subtotal |
|--------------------|-----|--------|----------|
| Organic Milk       | 1   | \$4.29 | \$4.29   |
| Wheat Bread        | 2   | \$3.49 | \$6.98   |
| Chicken (1.5 lb)   | 1.5 | \$4.99 | \$7.49   |
| Brown Rice         | 1   | \$2.99 | \$2.99   |
| Broccoli           | 2   | \$1.79 | \$3.58   |
| Apples (3 lb)      | 3   | \$1.99 | \$5.97   |
| Cheese 8 oz        | 1   | \$3.49 | \$3.49   |
| Canned Tomatoes    | 4   | \$0.99 | \$3.96   |
| Subtotal:          |     |        | \$38.75  |
| Tax (3% non-food): |     |        | \$0.31   |
| Coupon (-\$2.00):  |     |        | -\$2.00  |
| TOTAL:             |     |        | \$37.06  |

1. Which item had the highest subtotal?
2. Verify tax: only chicken (\$7.49) and rice (\$2.99) are taxable at 3%. Recalculate.
3. If you used a 10% off total coupon instead of \$2.00, which saves more?
4. You pay with \$50. How much change?

## Unit 5: Tipping

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### Section 5.1 — Tipping Basics

1. Tip:  $\$32 \times 0.15 = \$4.80$ . Total: \$36.80.
2. Tip:  $\$78.50 \times 0.18 = \$14.13$ . Total: \$92.63.
3. Tip:  $\$56.75 \times 0.20 = \$11.35$ . Total: \$68.10.
4. Tip:  $\$35 \times 0.20 = \$7$ . Total: \$42.
5. Tip:  $\$42.90 \times 0.15 = \$6.44$ . Total: \$49.34.
6. Gratuity:  $\$138.40 \times 0.18 = \$24.91$ . Total: \$163.31.
7. 10%=\$4.80, 20%=\$9.60, 15%=\$7.20.

### Section 5.2 — Splitting Bills & Review

1. Tip:  $\$67.80 \times 0.20 = \$13.56$ . Total: \$81.36. Each: \$27.12.
2. Tip:  $\$94.50 \times 0.18 = \$17.01$ . Total: \$111.51. Each: \$22.30.
3. Tip:  $\$126 \times 0.15 = \$18.90$ . Total: \$144.90. Each: \$24.15.
4. Even split:  $\$56.50 \times 1.20 / 3 = \$22.60$  each. Own+tip: Alex= $\$18.50 \times 1.20 = \$22.20$ , Bianca= $\$22.75 \times 1.20 = \$27.30$ , Carlos= $\$15.25 \times 1.20 = \$18.30$ .
5. Gratuity:  $\$215.60 \times 0.18 = \$38.81$ . Total: \$254.41. Each: \$31.80.

### Unit 5 Review

1. Tip: \$7.85. Total: \$60.15.
2. Tip: \$17.52. Total: \$105.12. Each: \$35.04.
3. Tipping compensates service workers who earn below minimum wage; % reflects quality.
4. Even:  $\$110 \times 1.20 / 4 = \$33$  each. Own+tip: \$12 person=\$14.40; others= $(\$110 - \$12) \times 1.20 / 3 = \$39.20$  each. Even split unfair to \$12 person.
5. Tip: \$17. Total: \$85.

## Unit 6: Sales Tax

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### Section 6.1 — Tax Rates & Calculations

1. Tax:  $\$89.99 \times 0.08 = \$7.20$ . Total:  $\$97.19$ .
2. Tax:  $\$649.99 \times 0.0725 = \$47.12$ . Total:  $\$697.11$ .
3. Subtotal:  $\$20.47$ . Tax:  $\$20.47 \times 0.065 = \$1.33$ . Total:  $\$21.80$ .
4. A:  $\$499 \times 1.06 = \$528.94$ . B:  $\$499 \times 1.095 = \$546.41$ . Diff:  $\$17.47$ .
5.  $\$107.52 / 1.0825 = \$99.33$ .

### Section 6.2 — Big Purchases & Review

1. Tax:  $\$15,500 \times 0.0825 = \$1,278.75$ . Total:  $\$16,778.75$ .
2. Tax:  $\$38.75 \times 0.07 = \$2.71$ . Total:  $\$142.50 + \$38.75 + \$2.71 = \$183.96$ .
3. Tax:  $(\$999 + \$39.99) \times 0.09 = \$93.60$ . Total:  $\$1,132.59$ .
4. Taxable: jacket  $\$120 \times 0.08 = \$9.60$ . Total:  $\$45 + \$65 + \$120 + \$12 + \$9.60 = \$251.60$ .
5. Tax:  $(\$1,299 + \$649) \times 0.075 = \$146.10$ . Total:  $\$2,094.10$ . Monthly:  $\$174.51$ .

### Unit 6 Review

1.  $\$275 \times 1.0675 = \$293.56$ .
2.  $\$68.40 + \$24.99 \times 1.075 = \$68.40 + \$26.86 = \$95.26$ .
3.  $\$215.30 / 1.08 = \$199.35$ .
4. Sales tax adds to actual cost; not budgeting for it leads to overspending. E.g.,  $\$1,000$  at  $8\% = \$80$  unexpected cost.
5.  $\$2,500 \times 1.085 = \$2,712.50$ . At  $\$200/\text{mo}$ : 14 months (13.56 rounded up).

■ **THANK YOU:** Thank you for using this resource! Find more premium materials at [UM Printables on Teachers Pay Teachers](#).