

Name: _____ Date: _____

Ledgers, Graphs and Gaps

GRADE 4

MATHEMATICS

B2.4

D1.3

A ledger has to agree with itself. When a total and its parts disagree, something is missing or mis-recorded, and finding which is the real work. Four weeks of the class economy are recorded in the table below.

Class Ledger, Four Weeks

Week	Earned	Spent
Week 1	\$1,240	\$860
Week 2	\$1,580	\$1,120
Week 3	\$1,365	\$940
Week 4	\$1,710	\$1,290

Source: the class transaction history

PART A: SAVINGS WEEK BY WEEK

1. Week 1 saved \$_____.
2. Week 2 saved \$_____.
3. Week 3 saved \$_____.
4. Week 4 saved \$_____.

PART B: FIND WHAT IS MISSING

5. The four weeks earned \$5,895 altogether. Weeks 1, 2 and 3 earned \$1,240, \$1,580 and \$1,365. Show that Week 4 earned what the table says.

SHOW YOUR WORK

Answer: _____

6. The ledger claims the class saved \$1,685 across the four weeks. Add the four weekly savings and say whether that claim holds.

SHOW YOUR WORK

Answer: _____

7. A fifth week is recorded with earnings of \$1,450 and savings of \$505, but the spending column is blank. What was spent that week?

SHOW YOUR WORK

Answer: _____

PART C: WHICH GRAPH, WHICH SCALE?

8. The class wants one graph showing earning and spending for all four weeks, with the two amounts side by side for each week. Which graph fits?
- ☐ A A multiple-bar graph ☐ B A single bar graph of earnings only
☐ C A circle graph of one week
9. The tallest bar on that graph is \$1,710. Which scale suits the axis best?
- ☐ A \$0 to \$1,800 in steps of \$200 ☐ B \$0 to \$500 in steps of \$50
☐ C \$0 to \$10,000 in steps of \$1,000

PART D: SHOW IT TO A VISITOR

10. Draw the graph that shows a visitor how earning and spending compared each week, using the Class Ledger table. Use the scale you chose in Part C, and give the graph a title, both axis labels, a legend and a source.

TITLE

AXIS LABEL

LEGEND

AXIS LABEL

WHERE THE NUMBERS CAME FROM

11. Explain why a graph of earnings alone would give the visitor the wrong idea. Use the savings you found in Part A.

Ledgers, Graphs and Gaps

ANSWER KEY

1. 380
2. 460
3. 425
4. 420
5. The first three weeks come to \$4,185, so Week 4 earned \$1,710, which matches the table.
6. The weekly savings are \$380, \$460, \$425 and \$420, which add to \$1,685, so the claim holds.
7. \$945.
8. A) A multiple-bar graph
9. A) \$0 to \$1,800 in steps of \$200
10. A multiple-bar graph with a pair of bars for each week, earned at \$1,240, \$1,580, \$1,365 and \$1,710 and spent at \$860, \$1,120, \$940 and \$1,290. The weeks under their bars, "Week" along the bottom and "Dollars" up the side, a scale from \$0 to \$1,800 in steps of \$200, a title such as "Class Earnings and Spending by Week", a legend for earned and spent, and a source line naming the class transaction history.
11. Earnings alone would make Week 4 look like the best week at \$1,710, when Week 2 actually kept more: \$460 saved against Week 4's \$420.

TEACHER NOTES

Extension beyond the grade-level expectation: Part B asks students to check a claimed total against its parts and to recover a blank entry, rather than simply adding a column. Part D is the point of the sheet: students draw the honest graph with every convention, then say why the flattering one misleads, with the numbers to back it.