# School Fun Fair

Teacher Guide · Solutions · Rubric

**Grade 3 · All levels**

## Overview

A cumulative project for Units 1–5. Students plan a school fun fair: tickets sold in equal groups, prizes shared equally among booths, fact strategies for prices, totals within 1,000 with rounding, and two-step budget problems with equations.

**Time:** 3 class periods · **Product:** Fun Fair Plan
**Standards:** 3.OA.A.1, 3.OA.A.2, 3.OA.A.3, 3.OA.A.4, 3.OA.B.5, 3.OA.C.7, 3.OA.D.8, 3.NBT.A.1, 3.NBT.A.2, 3.NBT.A.3
**Prerequisite skills:** Units 1–5 of 3rd Grade Math

## Learning targets

- I can multiply and divide within 100 to solve equal-group problems.
- I can add and subtract within 1,000 and round to estimate.
- I can write and solve two-step equations and check that the answer is reasonable.

## Timing and materials

- Day 1 (45 min): tickets and prizes (Parts 1–2).
- Day 2 (45 min): sales totals and rounding (Part 3).
- Day 3 (45 min): the budget and the final plan (Part 4); presentations.

**Materials:** Pencils; Booth cards and ticket sheet (printable support page); Play money (optional); Poster paper. No accounts, paid products or student personal information are needed.

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## The three versions

- Remedial: hints for a first step, partly filled tables, sentence frames and fewer open choices; the same learning targets.
- Standard: the full task set at grade level; students choose their strategies and models.
- Advanced: open design constraints, missing information, error analysis and a written justification; no hints.

All versions use the same context and learning targets, so groups can share and compare work.

## Implementation notes

- Use this after Unit 5 as a review; each part names the unit it reviews.
- Groups of 3–4 work well; rotate the recorder role.
- Advanced students decide how many prizes to buy within a budget and defend their choice.
- Before Part 1, read the challenge aloud and ask students to restate the goal.
- Close with a gallery walk: each group explains one strategy.

## Rubric

| Learning target | 4 Exceeds | 3 Meets | 2 Approaching | 1 Beginning |
|---|---|---|---|---|
| I can multiply and divide within 100 to solve equal-group problems. | Correct and complete; explains how | Mostly correct | Partly correct | Not yet |
| I can add and subtract within 1,000 and round to estimate. | Correct and complete; explains how | Mostly correct | Partly correct | Not yet |
| I can write and solve two-step equations and check that the answer is reasonable. | Correct and complete; explains how | Mostly correct | Partly correct | Not yet |
| I can explain my thinking with pictures, numbers and words. | Clear for every part | Clear for most parts | Some explanation | Little explanation |
| My fun fair plan is complete and matches my math. | Complete, neat, accurate | Complete | Partly complete | Not complete |

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## Solutions · Remedial KEY

### Part 1: Tickets (Unit 1)

Each child buys a strip of 5 tickets. 9 children buy strips at the first table.

**1.** How many tickets were sold at the first table?

**45 tickets**

**2.** Use a strategy to check 9 × 5.

**Example: skip count by 5s 9 times = 45**

### Part 2: Prizes (Units 2–3)

24 prizes are shared equally among 4 booths.

**3.** How many prizes does each booth get?

**6 prizes**

**4.** Write the fact family.

**4 × 6 = 24, 6 × 4 = 24, 24 ÷ 4 = 6, 24 ÷ 6 = 4**

### Part 3: Sales (Unit 4)

Morning sales were 215 tickets and afternoon sales were 168 tickets.

**5.** How many tickets were sold in all?

**383 tickets**

**6.** How many more tickets were sold in the morning?

**47 tickets**

**7.** Round each number to the nearest 100 and estimate the total. Is your exact total reasonable?

**200 + 200 = 400; yes, 383 is close.**

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## Part 4: Budget (Unit 5)

Each booth needs 3 bags of 20 balloons, and a bag costs 4 dollars.

**8.** Write an equation with b for the balloons needed for all 4 booths.

**b = 4 × (3 × 20)**

**9.** Solve for b.

**b = 240 balloons**

**10.** How much do all the bags cost?

**48 dollars**

## Extension

If 30 more tickets are sold in the evening, what is the new total? Round it to the nearest 10.

**413 tickets; about 410**

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## Solutions · Standard KEY

### Part 1: Tickets (Unit 1)

Each child buys a strip of 8 tickets. 7 children buy strips at the first table.

**1.** How many tickets were sold at the first table?

**56 tickets**

**2.** Use a strategy to check 7 × 8.

**Example: (7 × 5) + (7 × 3) = 56**

### Part 2: Prizes (Units 2–3)

48 prizes are shared equally among 6 booths.

**3.** How many prizes does each booth get?

**8 prizes**

**4.** Write the fact family.

**6 × 8 = 48, 8 × 6 = 48, 48 ÷ 6 = 8, 48 ÷ 8 = 6**

### Part 3: Sales (Unit 4)

Morning sales were 348 tickets and afternoon sales were 279 tickets.

**5.** How many tickets were sold in all?

**627 tickets**

**6.** How many more tickets were sold in the morning?

**69 tickets**

**7.** Round each number to the nearest 100 and estimate the total. Is your exact total reasonable?

**300 + 300 = 600; yes, 627 is close.**

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## Part 4: Budget (Unit 5)

Each booth needs 3 bags of 20 balloons, and a bag costs 4 dollars.

**8.** Write an equation with b for the balloons needed for all 6 booths.

**b = 6 × (3 × 20)**

**9.** Solve for b.

**b = 360 balloons**

**10.** How much do all the bags cost?

**72 dollars**

## Extension

If 30 more tickets are sold in the evening, what is the new total? Round it to the nearest 10.

**657 tickets; about 660**

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## Solutions · Advanced KEY

### Part 1: Tickets (Unit 1)

Each child buys a strip of 9 tickets. 9 children buy strips at the first table.

**1.** How many tickets were sold at the first table?

**81 tickets**

**2.** Use a strategy to check 9 × 9.

**Example: (9 × 5) + (9 × 4) = 81**

### Part 2: Prizes (Units 2–3)

72 prizes are shared equally among 8 booths.

**3.** How many prizes does each booth get?

**9 prizes**

**4.** Write the fact family.

**8 × 9 = 72, 9 × 8 = 72, 72 ÷ 8 = 9, 72 ÷ 9 = 8**

### Part 3: Sales (Unit 4)

Morning sales were 486 tickets and afternoon sales were 397 tickets.

**5.** How many tickets were sold in all?

**883 tickets**

**6.** How many more tickets were sold in the morning?

**89 tickets**

**7.** Round each number to the nearest 100 and estimate the total. Is your exact total reasonable?

**500 + 400 = 900; yes, 883 is close.**

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## Part 4: Budget (Unit 5)

Each booth needs 3 bags of 20 balloons, and a bag costs 4 dollars.

**8.** Write an equation with b for the balloons needed for all 8 booths.

**b = 8 × (3 × 20)**

**9.** Solve for b.

**b = 480 balloons**

**10.** How much do all the bags cost?

**96 dollars**

## Part 5: Prize Plan

The fair has 300 dollars for prizes. Small prizes cost 3 dollars and big prizes cost 9 dollars.

**11.** Each booth needs the same number of big prizes and 6 small prizes. How many big prizes can each of the 8 booths get?

**2 big prizes each (8 × 6 × 3 = 144 dollars for small prizes, leaving 156; 8 × 9 × 2 = 144)**

**12.** Explain how you know your answer stays within the budget.

**Answers vary; must show the total cost is at most 300 dollars.**

## Extension

If 30 more tickets are sold in the evening, what is the new total? Round it to the nearest 10.

**913 tickets; about 910**