

Part A: Partition These Shapes — Answer Guide

Students should draw lines to divide shapes into the specified equal parts.

Expected Partitions:

- Circle — Halves: One straight line through the center, creating 2 equal parts
- Rectangle — Thirds: Two vertical (or horizontal) lines creating 3 equal columns/rows
- Circle — Fourths: Two perpendicular lines through the center (like a + sign)
- Rectangle — Halves: One vertical or horizontal line through the center

Teaching Note: Accept any valid partitioning — parts must be equal in size.

Part B: Name the Equal Shares — Answers

2 equal parts → each part is called a **half (or one-half)**

3 equal parts → each part is called a **third (or one-third)**

4 equal parts → each part is called a **fourth (or one-fourth)**

Another word for fourths is **quarters**

Mastery Rubric:

D — Distinguished	Exceeds expectations; explains reasoning with clarity
A — Achieved	Meets standard; correct answers with appropriate work shown
P — Progressing	Partially correct; shows understanding but has errors
E — Emerging	Needs significant support; major conceptual gaps

A circle divided into 3 equal parts shows thirds.

Answer: True *(Three equal parts = thirds)*

Halves means 4 equal parts.

Answer: False *(Halves = 2 equal parts, not 4)*

A quarter of a rectangle is the same as one-fourth.

Answer: True *(Quarter and fourth are synonyms)*

If you cut a pizza into 2 unequal pieces, you have halves.

Answer: False *(Halves must be equal in size)*

Part D: Draw and Explain — Answer Guide

Two valid ways to partition a rectangle into fourths:

Way 1: Four horizontal rows

Also valid: 4 vertical columns

Way 2: 2x2 grid (2 rows × 2 columns)

Also valid: diagonal cuts (less common)

Sample explanation:

"Each part is one-fourth because there are 4 equal parts and they are all the same size."

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1. How many students chose dogs?

Answer: 8 students

2. Which pet was chosen the least?

Answer: Fish (only 3 students)

3. How many more students chose dogs than fish?

Answer: $8 - 3 = 5$ more students

4. How many students voted in all?

Answer: $8 + 6 + 3 + 5 = 22$ students

Teaching Notes:

- For Q4, look for students showing their addition work
- Accept any valid addition strategy (number line, counting on, decomposition)
- For Q3, students should show subtraction or comparison reasoning
- Encourage students to write complete sentences for answers

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Shape	Name	Sides	Angles	Special Attributes
■	Triangle	3	3	Closed shape; can be equilateral, isosceles, scalene
■	Square	4	4	All sides equal; all right angles; it's a special rectangle
■	Pentagon	5	5	5 straight sides; 5 angles
■	Hexagon	6	6	6 straight sides; 6 angles

Part C: Partition and Shade — Answer Guide

- 1. Circle in thirds: 3 lines from center at 120° apart; one section shaded = one-third
- 2. Rectangle in fourths: 4 equal sections; three sections shaded = three-fourths

Scoring Guide:

- Shape attributes table: 1 point per correct cell (16 points total)
- Partitioning: 2 points each (correct partition + correct shading)
- Distinguished: Labels parts with fraction names (1/3, 3/4)

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1. Maria: 47 stickers - $19 + 25$

Work: $47 - 19 = 28$; $28 + 25 = 53$ stickers

Answer: 53 stickers

Accept any valid strategy: number line, base-ten blocks, algorithm

2. Store: 83 apples - $36 - 28$

Work: $83 - 36 = 47$; $47 - 28 = 19$ apples

Answer: 19 apples

Accept any valid strategy: number line, base-ten blocks, algorithm

3. Jake: $24 + 38$ pages, needs 100 total

Work: $24 + 38 = 62$; $100 - 62 = 38$ more pages

Answer: 38 pages

Accept any valid strategy: number line, base-ten blocks, algorithm

Scoring — 3 points each:

1 pt: Correct equation(s) | 1 pt: Work shown | 1 pt: Correct final answer

Partial credit: 2 pts if equation and work correct but arithmetic error

4. Crayons: $156 - 48 - 23$

Work: $156 - 48 = 108$; $108 - 23 = 85$ crayons

Answer: 85 crayons

Models: bar diagrams, number lines, or place value drawings accepted

5. Lily's points: $35 + 42 + 28$

Work: $35 + 42 = 77$; $77 + 28 = 105$ points

Answer: 105 points

Models: bar diagrams, number lines, or place value drawings accepted

6. Farmer: $264 - 127 + 53$

Work: $264 - 127 = 137$; $137 + 53 = 190$ eggs

Answer: 190 eggs

Models: bar diagrams, number lines, or place value drawings accepted

Teaching Notes:

- Problem 4 requires two consecutive subtractions — watch for order of operations
- Problem 5 involves adding three numbers — encourage grouping strategies
- Problem 6 mixes subtraction then addition — common error: subtracting 53 instead of adding
- For all: Accept regrouping, expanded form, or compensation strategies

1. 4 hundreds + 7 tens + 2 ones = **472**
2. $600 + 50 + 8 =$ **658**
3. 385 in expanded form: **$300 + 80 + 5$**
4. Nine hundred sixteen in standard form: **916**

Part B: Compare — Answers

- | | | |
|-------------------------|---|--------------------------|
| 345 ■ 354 | < | (3=3, 4<5 in tens place) |
| 782 ■ 728 | > | (7=7, 8>2 in tens place) |
| $600+40+9$ ■ 649 | = | (649 = 649) |
| 5 hundreds 3 tens ■ 503 | > | (530 > 503) |

Part C: Skip Counting — Answers

Count by 5s: 215, 220, **225, 230, 235, 240, 245**

Count by 10s: 470, 480, **490, 500, 510, 520, 530**

Count by 100s: 100, 200, **300, 400, 500, 600, 700**

Part D: Add and Subtract Within 100 — Answers

- | | | |
|---------------------|---------------------|---------------------|
| $56+37 =$ 93 | $84-29 =$ 55 | $45+48 =$ 93 |
| $91-56 =$ 35 | $67+25 =$ 92 | $73-38 =$ 35 |

$$347 + 285 = 632$$

Strategy: Regroup ones: $7+5=12$; tens: $4+8+1=13$; hundreds: $3+2+1=6$

$$603 - 258 = 345$$

Strategy: Regroup from hundreds: $603 \rightarrow 5, 9, 13$; $13-8=5$, $9-5=4$, $5-2=3$

$$524 + 397 = 921$$

Strategy: Regroup ones: $4+7=11$; tens: $2+9+1=12$; hundreds: $5+3+1=9$

$$810 - 467 = 343$$

Strategy: Regroup: $810 \rightarrow 7, 10, 10$; $10-7=3$, $10-6=4$ (after regroup), $7-4=3$

Part F: Explain Your Strategy — Sample Response

"For $347 + 285$, I used the standard algorithm. First I added the ones: $7 + 5 = 12$, so I wrote 2 and carried 1. Then tens: $4 + 8 + 1 = 13$, wrote 3 and carried 1. Then hundreds: $3 + 2 + 1 = 6$. Answer: 632."

Challenge Corner Answer:

$$478 - 189 = 289; 289 - 156 = 133 \text{ students in grades 3-5}$$

Also valid: $189 + 156 = 345$; $478 - 345 = 133$

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