

# Bridges in Mathematics

## Grade 3 Unit 6

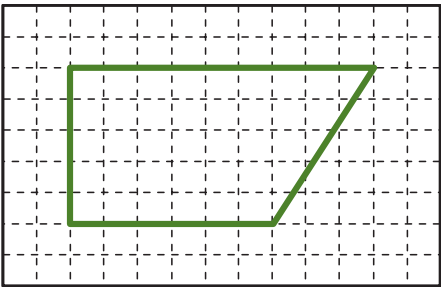
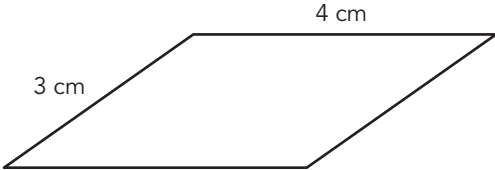
# Geometry

In this unit your child will:

- Describe and classify two-dimensional shapes, especially quadrilaterals
- Calculate area and perimeter
- Represent fractions as parts of a whole shape



Your child will learn and practice these skills by solving problems like those shown below. Keep this sheet for reference when you're helping with homework. Use the free Math Vocabulary Cards app for additional support: [mathlearningcenter.org/apps](http://mathlearningcenter.org/apps)

| PROBLEM   | COMMENTS   |               |        |        |        |   |       |     |     |        |        |        |  |
|---|--|---------------|--------|--------|--------|---|-------|-----|-----|--------|--------|--------|--|
| <p>Draw a quadrilateral with exactly 1 acute angle.</p>    | <p>There are many different quadrilaterals (shapes with 4 sides) that have exactly 1 acute angle, and this is just one example. All of the prompts that ask students to draw a shape with certain attributes provide a grid. Invite your child to use the grid to determine whether angles are greater than, less than, or equal to 90 degrees and whether sides are parallel or perpendicular. You might suggest that your child draw the specified attribute first (in this example, the acute angle) and then draw the rest of the shape.</p>           |               |        |        |        |   |       |     |     |        |        |        |  |
| <p>Apples cost 25¢ for <math>\frac{1}{3}</math> kilogram. How much would 6 kilograms of apples cost?</p> <table border="1" data-bbox="180 1465 740 1581"> <tr> <td>Kg</td> <td><math>\frac{1}{3}</math></td> <td>1</td> <td>2</td> <td>4</td> <td>6</td> </tr> <tr> <td>price</td> <td>25¢</td> <td>75¢</td> <td>\$1.50</td> <td>\$3.00</td> <td>\$4.50</td> </tr> </table> | Kg   | $\frac{1}{3}$ | 1      | 2      | 4      | 6 | price | 25¢ | 75¢ | \$1.50 | \$3.00 | \$4.50 | <p>Students use ratio tables to solve problems that involve a constant ratio. In this example, the ratio is the price per kilogram. Students might first calculate a price for 1 kilogram and then work from there to determine the price for 6 kilograms.</p> |
| Kg  | $\frac{1}{3}$  | 1             | 2      | 4      | 6      |   |       |     |     |        |        |        |  |
| price   | 25¢  | 75¢           | \$1.50 | \$3.00 | \$4.50 |   |       |     |     |        |        |        |  |
| <p>What is the perimeter of this parallelogram?</p>  <p><math>3 + 3 + 4 + 4 = 6 + 8 = 14</math><br/>14 cm</p>  | <p>Because students are told that this is a parallelogram, they know that opposite sides are parallel and therefore have the same length. This allows them to determine the missing side lengths and then find the sum of all the side lengths to calculate the perimeter. If students aren't yet comfortable with this kind of reasoning, they might also measure the other two sides to confirm their lengths. This problem has been made small enough to fit in this table, but problems in the homework allow students to take exact measurements.</p> |               |        |        |        |   |       |     |     |        |        |        |  |

## FREQUENTLY ASKED QUESTIONS ABOUT UNIT 6

**Q:** A lot of the problems ask students to draw shapes, but I don't know how. How can I help?

**A:** There are many ways to respond correctly to these prompts: you can draw quite a few different shapes that fit each description. If you can't remember the vocabulary terms, you can use the Word Resource Cards app (see previous page) to help or consult any number of online math glossaries for kids. Then, have your child start drawing, and encourage them to use to the grid lines. Have them use a pencil so they can erase as needed. Encourage them to use as much of the drawing space as they can: starting with larger shapes will given them more flexibility if they need to revise their shapes.