## Unit 1 Lesson 5: Areas of Parallelograms

### 1 A Parallelogram and Its Rectangles (Warm up)

#### Student Task Statement

Elena and Tyler were finding the area of this parallelogram:



Here is how Elena did it:



Here is how Tyler did it:



How are the two strategies for finding the area of a parallelogram the same? How they are different?

#### Activity Synthesis



### 2 Finding the Formula for Area of Parallelograms

#### Student Task Statement

For each parallelogram:

* Identify a base and a corresponding height, and record their lengths in the table.
* Find the area of the parallelogram and record it in the last column of the table.



|  |  |  |  |
| --- | --- | --- | --- |
| **parallelogram** | **base (units)** | **height (units)** | **area (sq units)** |
| **A** |  |  |  |
| **B** |  |  |  |
| **C** |  |  |  |
| **D** |  |  |  |
| **any parallelogram** | $b$ | $h$ |  |

In the last row, write an expression for the area of any parallelogram, using $b$ and $h$ .

### 3 More Areas of Parallelograms

#### Student Task Statement

1. Find the area of each parallelogram. Show your reasoning.
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1. In Parallelogram B, what is the corresponding height for the base that is 10 cm long? Explain or show your reasoning.
2. Two different parallelograms P and Q both have an area of 20 square units. Neither of the parallelograms are rectangles.
* On the grid, draw two parallelograms that could be P and Q.
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