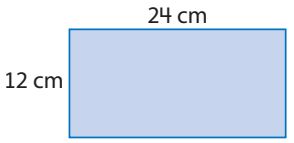
Apply

Ideas About Tiling in Rectangles

Put It Together **Use what you have learned to complete this task.**

15 Sue is making a mosaic design. She has squares that are the sizes below. But she can only use squares that are all the same size.

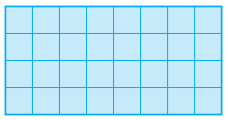
Sue will use the squares to fill a piece of paper that is 24 centimeters long and 12 centimeters wide.



Squares and rectangle are not life-sized.

Part A Can Sue use the 3-centimeter squares to make her design? If so, how many squares will she need? Draw a picture at the right to help you explain.

Yes, Sue can use the 3 cm squares to make 4 rows of squares with 8 squares in each row or 32 total squares.



Part B Repeat Part A for the 4-centimeter squares.

The 4-centimeter squares will fit in 3 rows of 6 squares.

Part C Repeat Part A for the 5-centimeter squares.

The 5-centimeter tiles won't fit exactly in the rectangle.

Independent Practice

Step By Step

Put It Together

- Direct students to complete the **Put It Together** task on their own.
- Read the directions with students and make sure they understand each part of the task before proceeding.
- Tell students that the pictures of Sue's squares and piece of paper are not life-sized, and that students' drawings don't need to be the exact size either.
- Instruct students to make their drawings in the blank space at the right of Parts A, B, and C. Show how to draw a rectangle, labeling the sides 24 cm and 12 cm.
- In one corner of the rectangle, draw a square with the number 3 in it. Point out that students can see how many squares they need to draw for each row or column by figuring out how many 3s add up to 24 or 12. They can use a similar strategy for the 4 cm and 5 cm squares.
- If time permits, ask students to share the square sizes they chose and justify their choices.

Ready Mathematics PRACTICE AND PROBLEM SOLVING

Assign *Practice and Problem Solving* **pages 287–288** after students have completed Guided Practice.

Scoring Rubrics

Parts A and B

Points	Expectations
2	The student states that 3 cm squares can be used and 4 cm squares can be used. The student draws rectangles showing 32 and 18 squares respectively.
1	The student states that 3 cm and 4 cm squares can be used, but the drawings are inaccurate. Words may or may not be present to explain reasoning.
0	The student states that 3 cm and 4 cm squares cannot be used.

Part C

Points	Expectations
2	The student states that 5 cm squares cannot be used and clearly articulates his or her reasoning.
1	The student states that 5 cm squares cannot be used but does not provide any reasoning for this answer.
0	The student states that 5 cm squares can be used.