**Break-Ground:**

# What is area?

*Two young mathematicians discuss the idea of area.*

Check out this dialogue between two calculus students (based on a true story):

**Devyn:** Riley, I've have a troubling question.

**Riley:** Yes?

**Devyn:** What is area?

**Riley:** Oh, for a rectangle it is just

$$\text{height} \times \text{width}$$

**Devyn:** Right. But shouldn't it mean more?

Area is a funny thing. What is it really? Well the idea is this:

> Define something as having a "unit" area, and see how many times it "covers" something.

The most obivious thing to use for our "unit" area is a unit square. From this we can quickly move on to find the area of any rectangle as

$$\text{height} \times \text{width}$$

**Problem 1** *Sometimes area is described as "how much paint will cover a surface." Is this accurate? What do you think?*

***Free Response:***

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Learning outcomes: Define area.