## Lesson 3: Reasoning to Find Area

Let’s decompose and rearrange shapes to find their areas.

### 3.1: Comparing Regions

Is the area of Figure A greater than, less than, or equal to the area of the shaded region in Figure B? Be prepared to explain your reasoning.



### 3.2: On the Grid

Each grid square is 1 square unit. Find the area, in square units, of each shaded region without counting every square. Be prepared to explain your reasoning.



#### Are you ready for more?

Rearrange the triangles from Figure C so they fit inside Figure D. Draw and color a diagram of your work.

### 3.3: Off the Grid

Find the area of the shaded region(s) of each figure. Explain or show your reasoning.



### Lesson 3 Summary

There are different strategies we can use to find the area of a region. We can:

* Decompose it into shapes whose areas you know how to calculate; find the area of each of those shapes, and then add the areas.



* Decompose it and rearrange the pieces into shapes whose areas you know how to calculate; find the area of each of those shapes, and then add the areas.



* Consider it as a shape with a missing piece; calculate the area of the shape and the missing piece, and then subtract the area of the piece from the area of the shape.



The area of a figure is always measured in square units. When both side lengths of a rectangle are given in centimeters, then the area is given in square centimeters. For example, the area of this rectangle is 32 square centimeters.





© CC BY Open Up Resources. Adaptations CC BY IM.