

# Discussion Problems

## Step 1: What is Area?

Teaching note: For both questions, an A3 copy on card and scissors may be necessary.

### National Curriculum Objectives:

Mathematics Year 4: (4M7b) [Find the area of rectilinear shapes by counting squares](#)

### About this resource:

This resource has been designed for pupils who understand the concepts within [this step](#). It provides pupils with more opportunities to enhance their reasoning and problem solving skills through more challenging problems. Pupils can work in pairs or small groups to discuss with each other about how best to tackle the problem, as there is often more than one answer or more than one way to work through the problem.

There may be various answers for each problem. Where this is the case, we have provided one example answer to guide discussion.

We recommend self or peer marking using the answer page provided to promote discussion and self-correction.

More [Year 4 Area](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

# What is Area?

1. Use the shape and area dominoes to create a continuous loop. Some of the shapes are made up of both squares and half squares.

## RULES:

1. The dominoes can be connected horizontally or vertically.
2. The touching sides of the dominoes must be equal.
3. Use this square to measure your shapes: 

3  
squares



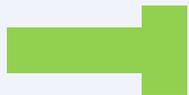
10  
squares



9  
squares



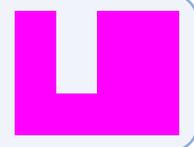
8  
squares



11  
squares



4  
squares



5  
squares



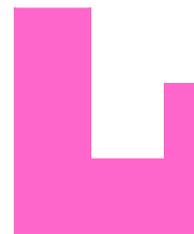
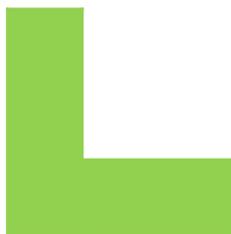
6  
squares



DP

2. Carefully cut out the rectilinear shapes. Rearrange the shapes to create a new rectilinear shape and measure the area using the reference square.

Reference square



Explore the different shapes that can be made with an area between 20 and 40 squares.

DP

# What is Area?

1. Use the shape and area dominoes to create a continuous loop. Some of the shapes are made up of both squares and half squares.

The sequence can be completed as follows, with any domino as the starting point:

3 squares

6 squares

11 squares

4 squares

9 squares

5 squares

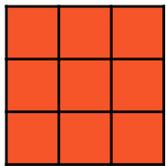
8 squares

10 squares

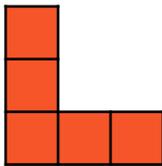
DP

2. Carefully cut out the rectilinear shapes. Rearrange the shapes to make a new rectilinear shape and measure the area using the reference square.

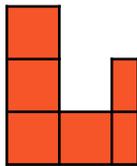
Area:



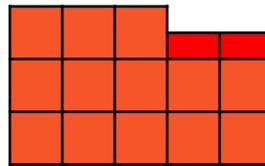
9 squares



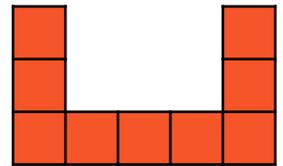
5 squares



5 squares

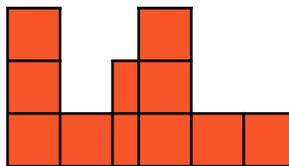


14 squares



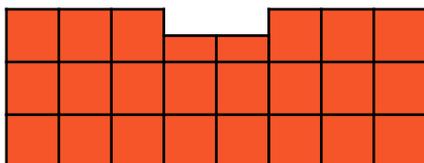
9 squares

New rectilinear shape:  
10 squares



Explore the different shapes that can be made with an area between 20 and 40 squares.

Various answers, for example:



This shape has an area of 23 squares.

DP