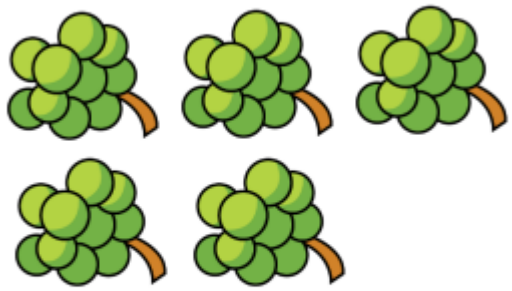
Diving Deeper! Multiplication, Division and Fractions

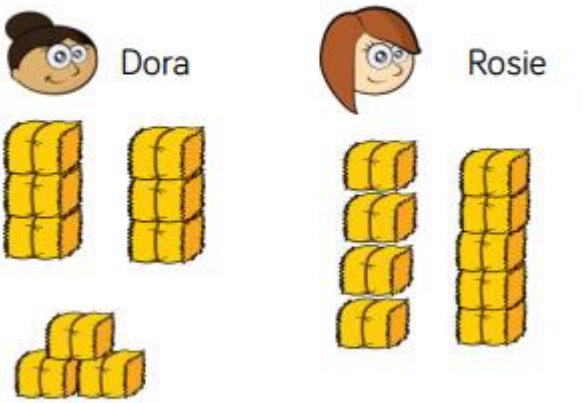
To stretch your learning in this unit you could try to answer some of these problem and reasoning questions. They require you to explain your thinking and give an explanation as to how you know the answer.

Try one or two per day if you are looking to stretch your mathematical thinking.

Question	Answer
In a shop, grapes come in bunches of 10  Max wants to buy forty grapes. Are there enough grapes?	Example: Yes there are enough grapes. There are fifty grapes and Max only needs forty
Jemima is counting in 10s on part of a hundred square. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 She starts at 10 Shade in all the numbers Jemima will say. What is the same about the numbers she says? What is different about the numbers?	

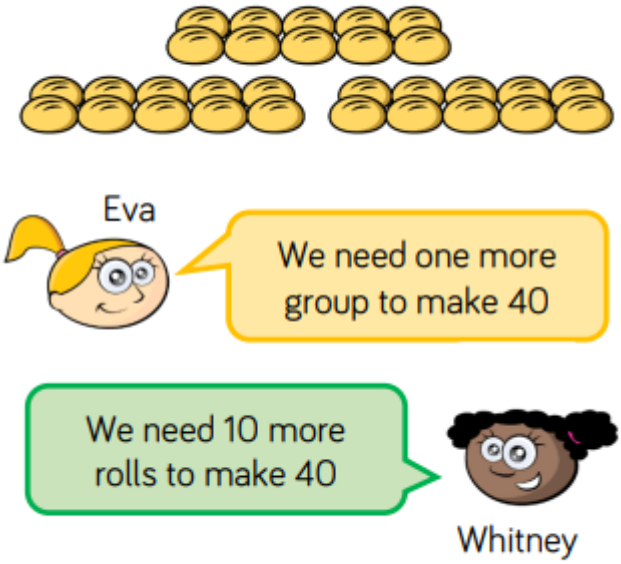
Dora and Rosie are making hay bundles.

Who has made equal groups?



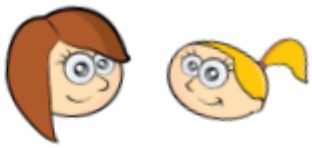
Explain how you know.

Eva and Whitney are making equal groups of bread rolls.



Who do you agree with? Explain why.

Rosie and Eva have equal groups of either 2, 5 or 10



Each of their totals is less than 40

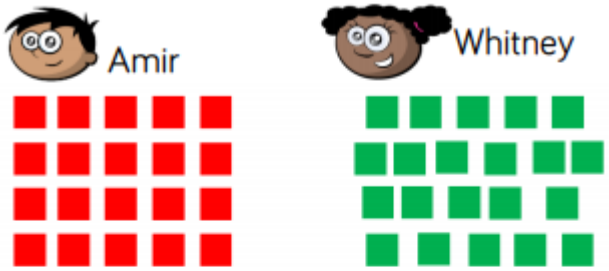
Rosie has 5 equal groups.
Eva has 3 equal groups.

Eva's total is more than Rosie's total.

What could they be counting in?

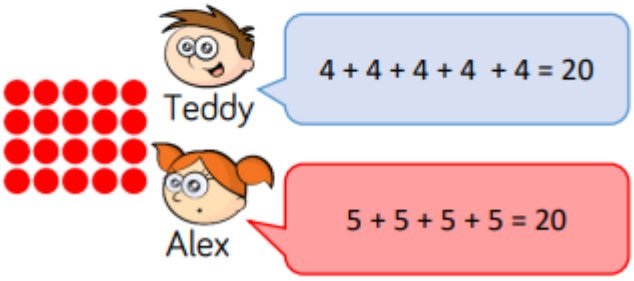
Use equipment to help you.

Amir and Whitney are making arrays.



Who has made a mistake? Explain why.

Teddy and Alex are writing number sentences to describe the array.



Who do you agree with? Explain why.

Eva begins to make an array with 40 counters.
She has finished her first row and her first column.
Complete her array.

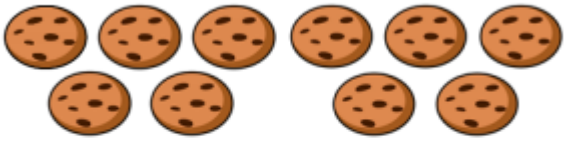
Write two different number sentences to describe the finished array.

Complete the table by doubling each number.

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

What patterns do you notice?

Dora has 10 biscuits.



She wants to share them equally at her party.

How many people could be at the party?

There are 10 cakes and 2 boxes.

An equal amount needs to be put into each box.

Jack

Put them into groups of 2

Eva

Share them into 2 groups.

Who is correct?
Explain your answer.

Eva and Jack are both attempting to split a rectangle in half.

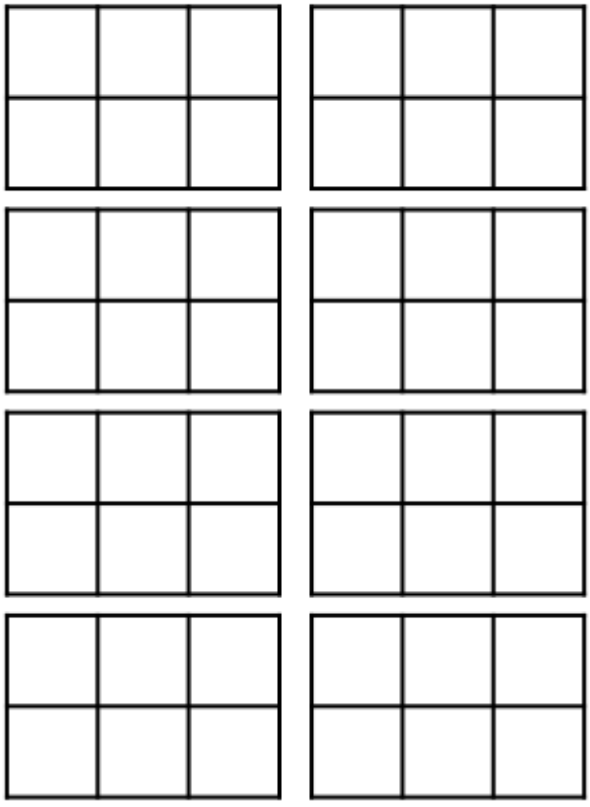
Eva

Jack thinks he can find three more ways.

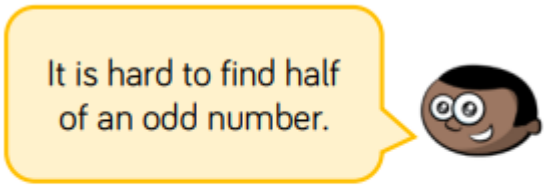
Jack

Find Jack's three examples.

How many different ways can you shade one half of the shapes?

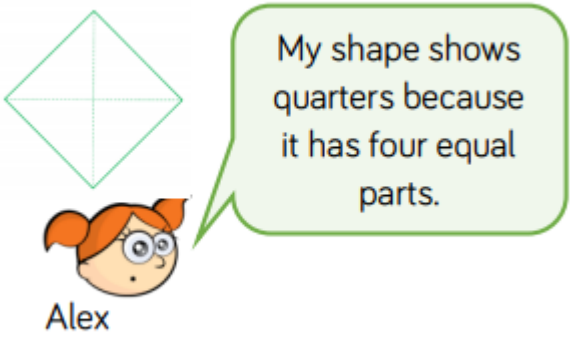


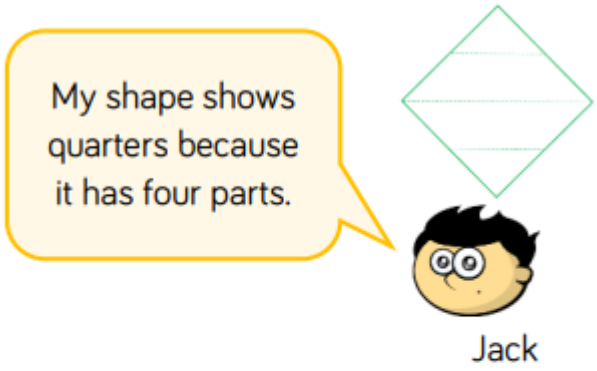
Mo is finding halves.



Do you agree with Mo?
Explain your answer.

Alex and Jack are talking about quarters.

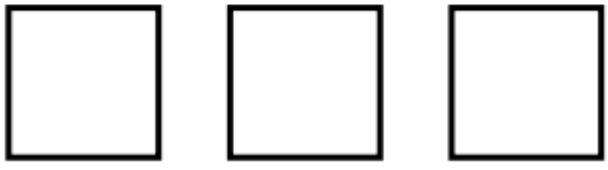




Are they correct?
Explain your answer.

Use the squares to show:

- Less than a quarter shaded.
- Exactly a quarter shaded.
- More than a quarter shaded.



Mr. White has asked his class to put one quarter of the balls into the hoop.

I'm going to put one ball in the hoop.

Teddy

I'm going to put three balls in the hoop.

Whitney

I'm going to put four balls into the hoop.

Tommy

Who is correct? Can you explain any mistakes made?