

Discussion Problems

Step 2: Find and Make Number Bonds

National Curriculum Objectives:

Mathematics Year 1: (1C1) [Represent and use number bonds and related subtraction facts within 20](#)

About this resource:

As this resource is aimed at Year 1, we recommend that an adult reads the problem to children who cannot yet access it for themselves.

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.

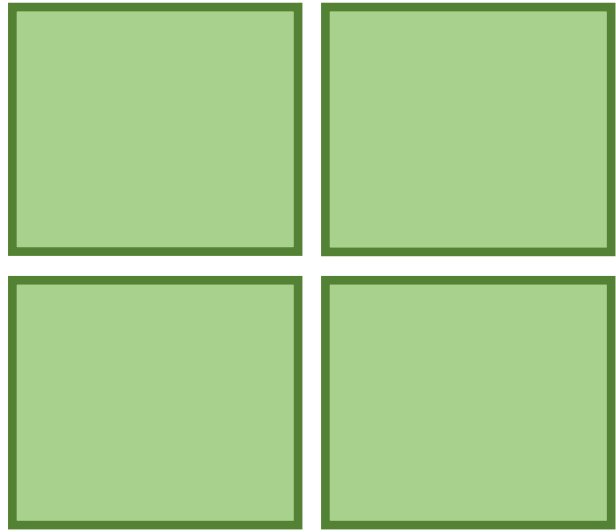
We recommend self or peer marking using the answer page provided to promote discussion and self-correction.

More [Year 1 Addition and Subtraction](#) resources.

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Find and Make Number Bonds

1. Farmer Bob and Farmer Becky have two fields each. Farmer Bob has seven cows which he shares between his 2 fields. Farmer Becky has 17 cows and she wants one of her fields to always have the same number of cows as one of Farmer Bob's fields.



How many cows will there be in each field? Investigate the different possibilities for each farmer.

Can you find a pattern?

DP

2. Fred and Anam are discussing number bonds for two numbers.

5

15



Fred

There will be twice as many number bonds for fifteen than five.



Anam

There will be 10 more number bonds for fifteen than five because we added 10.

Work systematically to find out who is correct.

DP

Find and Make Number Bonds

1. Farmer Bob and Farmer Becky have two fields each. Farmer Bob has seven cows which he shares between his 2 fields. Farmer Becky has 17 cows and she wants one of her fields to always have the same number of cows as one of Farmer Bob's fields.



Farmer Becky	Farmer Bob
$11 + 6 = 17$	$1 + 6 = 7$
$12 + 5 = 17$	$2 + 5 = 7$
$13 + 4 = 17$	$3 + 4 = 7$
$15 + 2 = 17$	$5 + 2 = 7$
$16 + 1 = 17$	$6 + 1 = 7$

How many cows will there be in each field? Investigate the different possibilities for each farmer. **Various answers, see table.**

Can you find a pattern? **There is a difference of 10 cows for every 1 of Farmer Becky and Farmer Bob's fields.**

DP

2. Fred and Anam are discussing number bonds for two numbers.

5

15



Fred

There will be twice as many number bonds for fifteen than five.



Anam

There will be 10 more number bonds for fifteen than five because we added 10.

Work systematically to find out who is correct.

Number bonds to 5: $0 + 5 = 5$; $1 + 4 = 5$; $2 + 3 = 5$; $3 + 2 = 5$; $4 + 1 = 5$; $5 + 0 = 5$.

Number bonds to 15: $0 + 15 = 15$; $1 + 14 = 15$; $2 + 13 = 15$; $3 + 12 = 15$; $4 + 11 = 15$; $5 + 10 = 15$; $6 + 9 = 15$; $7 + 8 = 15$; $8 + 7 = 15$; $9 + 6 = 15$; $10 + 5 = 15$; $11 + 4 = 15$; $12 + 3 = 15$; $13 + 2 = 15$; $14 + 1 = 15$; $15 + 0 = 15$.

Anam is correct because there are 6 number bonds for 5 and 16 number bonds for 15.

DP