

Arrays and equal groups

Teacher guide | choose support, core or challenge

Arrange objects in equal rows and connect the arrangement to repeated addition and multiplication. An array makes the equal groups visible and supports discussion of the two orientations.

Prepare

Use counters or base-ten materials for number work; use same-sized paper bars for fractions. Print at Actual size on A4 paper. The original two-page resource is included at the end of this pack.

Teach and discuss

Model one example, ask the learner to explain a choice, then give time for independent or paired practice. These are options within a lesson, not a requirement to finish every page.

Choose the level

Page 2 provides a supported starting point. Pages 5-6 contain the original core activity and teacher notes. Page 3 adds reasoning and challenge; use it when the underlying idea is understood.

Review

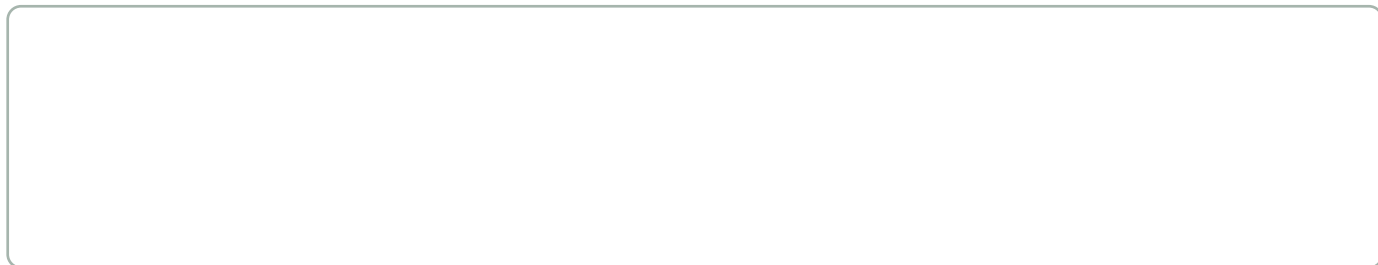
Use the answer notes on page 4 and ask for an explanation or model. Offer drawing, discussion and usual communication tools. Choose the level by understanding rather than a fixed label for the child.

Arrays and equal groups

Supported activity | use materials and explain

Name: _____ Date: _____

1. Make 2 rows with 3 counters in each. Draw your array.



2. Make 3 rows with 2 counters in each. What stays the same?



3. Draw 2 rows of 5. Write the total and repeated addition.



4. Draw 4 rows of 2. Write a multiplication to match.



Arrays and equal groups

Challenge activity | show your reasoning

Name: _____ Date: _____

1. Draw every different rectangular array for 12 counters, counting turns as the same.



2. Show 4×6 as two smaller arrays. Explain how their totals combine.



3. Can 13 counters make an array with more than one row and more than one counter per row?



4. Draw an array for 3×5 , then add one equal row. Write both facts.



Arrays and equal groups

Teacher answers | accept other valid explanations

Supported activity

1. 6 counters; $3 + 3 = 6$; $2 \times 3 = 6$.
2. 6 counters. The total is unchanged, while rows and counters per row are exchanged.
3. 10; $5 + 5 = 10$.
4. $4 \times 2 = 8$. Accept 2×4 with a matching explanation of orientation.

Challenge activity

1. 1×12 , 2×6 and 3×4 ; three arrays when turns count as the same.
2. For example, $(2 \times 6) + (2 \times 6) = 12 + 12 = 24$. Other valid splits are acceptable.
3. No. The only whole-number factor pair is 1 and 13; explain through attempted equal rows.
4. $3 \times 5 = 15$ and $4 \times 5 = 20$; the extra row adds 5.

Arrays and equal groups

Suggested: Year 2 | Pupil page

Connect rows of dots with repeated addition and multiplication.

Name: _____ Date: _____

For this sheet, rows go across. Write a repeated addition and a multiplication for each array.



____ rows of ____ = ____

Addition: _____

Multiplication: _____



____ rows of ____ = ____

Addition: _____

Multiplication: _____



____ rows of ____ = ____

Addition: _____

Multiplication: _____



____ rows of ____ = ____

Addition: _____

Multiplication: _____

A turned array can show another multiplication with the same total. Explain how you are reading your rows.

Arrays and equal groups | Teacher notes

Suggested: Year 2 | Teacher page

Purpose and use

Connect rows of dots with repeated addition and multiplication.

Teaching notes

Accept the commuted multiplication if the pupil explains how they read the array. The printed rows prompt has one stated orientation.

Ask pupils to notice equal groups; counting every dot is a starting point, not the only possible method.

Answers / suggested responses

1. 2 rows of 5 = 10; $5 + 5 = 10$; $2 \times 5 = 10$.
2. 3 rows of 2 = 6; $2 + 2 + 2 = 6$; $3 \times 2 = 6$.
3. 4 rows of 5 = 20; $5 + 5 + 5 + 5 = 20$; $4 \times 5 = 20$.
4. 2 rows of 10 = 20; $10 + 10 = 20$; $2 \times 10 = 20$.

Print and adapt

Print the pupil page only if you do not need these notes. Use A4 paper. Provide appropriate help, access tools or a spoken response where useful. Suggested year or grade ranges are starting points, not a statement of curriculum alignment.

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