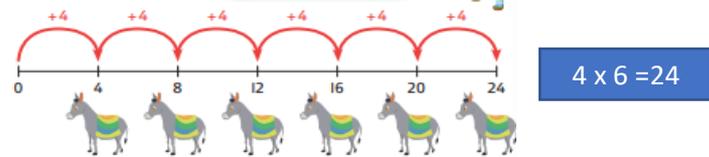


Key concepts and questions

Why count in groups and not in 1s?

Counting in 1s is not efficient, it much quicker to count in groups. For the below image there are 6 donkeys with four legs. To find the total amount of legs, it is easier to count in groups of 4.



What is a remainder?

A remainder is the amount left after completing a division calculation. There is not always a remainder. If the number is a multiple of the divisor, there will not be a remainder.



Making connections

Doubling

Doubling can be used to support multiplication

- Doubling the 2 x table can be used with the 4 x table.
 $2 \times 3 = 6$ $4 \times 3 = 12$
- Doubling the 4 x table can be used with the 8 x table
 $4 \times 5 = 20$ $8 \times 5 = 40$

Fractions

Known facts for halves and quarters can speed up dividing by 2 and 4

- $\frac{1}{2}$ of 20 is the same as $20 \div 2$
- $\frac{1}{4}$ of 20 is the same as $20 \div 4$

Using known facts

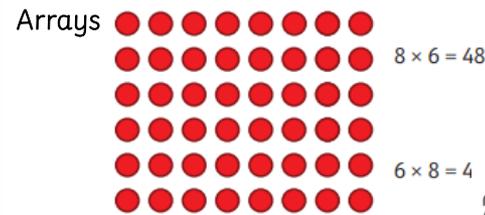
Known multiplication facts will identify if there is a remainder in a division calculation

$33 \div 4$ will have a remainder because 33 is not a multiple of 4.

Key Vocabulary

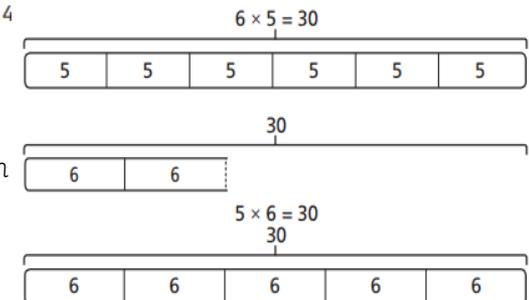
hundreds	tens	ones	zero
place value	multiply	divide	group
equal groups	same number of items	share	split a whole into equal groups.
unequal groups	Not the same number of equal groups.	remainder	the amount left over when dividing a number
array	placing objects into rows and columns.	times tables	Related multiplication facts $2x$ $3x$ $4x$ $5x$ $8x$ $10x$

Representations



Bar Models

Represent multiplication or division calculations and problems.



Number lines

Show repeated addition and subtraction.

