

Maths - Year 4

Calculating 11: Using multiplying facts to solve dividing problems

Key Vocabulary

Inverse	The reverse or the opposite.
Factor	A number that divides into another number exactly, e.g. 4 is a factor of 8.
Fraction	A part of a whole amount e.g. $\frac{1}{3}$
Remainder	Something that is left over when other parts have been used.
Grouping/ Sharing	Occurs in dividing when we know an amount and want to find out how many times a different amount will go into it, e.g. 2 goes into 10 five times.

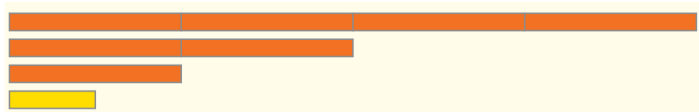
Mathematical Skills

- Find halves, quarters and eighths of a number or quantity.
- Record dividing facts and the inverse multiplying facts.
- Related halving to dividing into 2.
- Use multiplying facts as a strategy when dividing.
- Complete calculations accurately using the short written method of dividing.
- Show understanding of the distributive property of multiplying when using multiplying facts as a strategy for dividing.
- Use a times table grid square and the distributive property of multiplying to derive dividing facts.
- Describe part of an array as a fraction of the whole array.
- Explain links between finding fractions and dividing.
- Explain remainders in ways that are consistent with the context of the dividing problems.

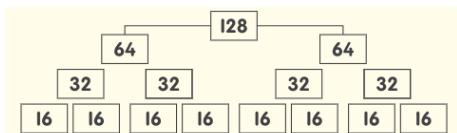
Mathematical Methods

- A halving strategy e.g. finding halves, quarters and eighths.

Cut	Number of parts
1st cut	2
2nd cut	4
3rd cut	8

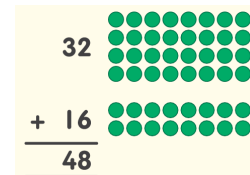


- Using a halving strategy with dividing problems in real-life contexts.

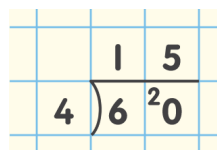


- Using multiplying facts as a strategy for dividing.

E.g. $1 \times 8 = 8$ $8 \div 8 = 1$
 $2 \times 8 = 16$ $16 \div 8 = 2$
 $3 \times 8 = 24$ $24 \div 8 = 3$
 $4 \times 8 = 32$ $32 \div 8 = 4$
 $8 \times 8 = 64$ $64 \div 8 = 8$

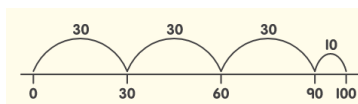


- Using the short written method of dividing.



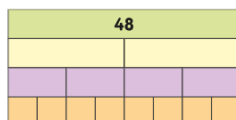
- Finding fractions of amounts using multiplying and dividing facts e.g. $6 \times 4 = 24$ $\frac{1}{6}$ of 24 = 4
 $4 \times 6 = 24$ $\frac{1}{4} \times 5 = \frac{5}{4}$
 $24 \div 6 = 4$
 $24 \div 4 = 6$

- Working with remainders in problems e.g. how many 30p fete games could I play with a total of £1?



Can you..?

- Work out the following:



a $48 \div 2 =$ b $48 \div 4 =$ c $48 \div 8 =$ d $\square \div \square = \square$
 e $480 \div 2 =$ f $480 \div 4 =$ g $480 \div 8 =$ h $\square \div \square = \square$

- Use known number facts to work out $65 \div 13 =$
- True or false? $36 \div 4 = 18 \div 2$ How do you know?
- Use the grid to calculate the missing amount.

X	1	2	4	5	10
3	3	6	12	15	30
6	6	12	24	30	60
9	9	18	36	45	90
12	12	24	48	60	120

