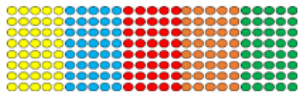


$$25 \times 8 = 5 \times 5 \times 8$$

$$= 5 \times \square = \square$$

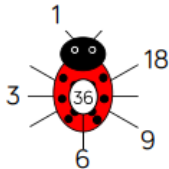


Focus

Multiplication and Division

Time

3 weeks



R2P: 4MD-1, 4MD-2, 4MD-3

NC

Recall and use multiplication and division facts for multiplication tables to 12x12.

Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers.

Recognise and use factor pairs and commutativity in mental calculations.

Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.

Solve problems involving multiplying and adding, including using the distributive law to multiply 2 digit numbers by one digit, integer scaling problems and harder correspondence problems such as an objects connected to m objects.

Times Tables 4NF-1

7x table - Recall multiples, missing numbers, division, fractions
Count in 11s

Vocabulary

Multiplication, Multiply, Multiplied by, Multiple
Product, Times
Division, Dividing, Grouping, Sharing
Equal groups of
Group in tens, hundreds, sixes, sevens, nines
X, I like it so much I want X times
Doubling, Halving
Number patterns,
Once, twice, three.... times
Repeated addition
Array, row, column
Multiplication table, Multiplication fact
Inverse, remainder, exchange

Concept Sequence

Factor pairs – a factor is a whole number that multiplies by another to make a product (factor x factor = product). Develop factor pairs using concrete resources and work systematically.

Use factor pairs – write equivalent calculations, eg. $5 \times 12 = 5 \times 4 \times 3$

Multiply by 10 – recognise that the digits move one place to the left and a zero is needed as a placeholder.

Multiply by 100 – recognise that the digits move two places to the left and zeros are required as placeholders.

Divide by 10 – link to one tenth. Recognise that digits move one place to the right. Note that multiplying by 10 and dividing by ten are inverses.

Divide by 100 – link to dividing by 10 and finding one hundredth. Note digits move two places to the right and that it is the inverse of x100.

Related facts – Multiplication and Division scaling facts by 10 and 100, eg. $4 \times 7 = 28$ so $400 \times 7 = 2800$.

Informal Written Methods for Multiplication - use informal written methods for $2d \times 1d$ – part-whole, place value grids, number lines....

Multiply 2d by 1d – *recap* Y3. Formal short method, with exchange. Use place value counters to support.

Multiply 3d by 1d – be aware of misconceptions arising from use of 0. Use exchange.

Divide 2d by 1d – *recap* Y3. No exchange first.

Divide 2d by 1d – remainders. Remainder can never be more than the number dividing by.

Divide 3d by 1d – support with place value counters and part-whole models. With/without remainders.

Correspondence problems – find solutions and use multiplications facts to problems.

Resources

Base 10, Objects (counters, cubes), place value chart/counters
100 Square, Number Lines, Counting stick
Gordons Maths Games, Mathletics, TTRockstars
BBC Super Movers
<https://www.bbc.co.uk/teach/supermovers/ks2-maths-collection/z7frpg8>
Working Wall – stem sentences

Planning Links

Maths No Problem Text Books, Aspire Maths
White Rose Scheme of Work:
<https://assets.whiterosemaths.com/new-schemes/Year%204%20Spring%20Block%201%20SQL%20Multiplication%20and%20division%20B.pdf>
NCETM Teacher Guide and Representations:
<https://www.ncetm.org.uk/teaching-for-mastery/mastery-materials/primary-mastery-professional-development/multiplication-and-division/>