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| Year 5ES | End of year expectations for mental calculation | End of year expectations for written methods and problem solving | Written strategies/ recordings/methods/images | Vocabulary& Links |
| Pupils should be taught to:* Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.
* Multiply and divide numbers mentally drawing upon known facts.
* Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.

Pupils should be able to:* Apply all the multiplication tables and related division facts frequently and use them confidently.
 | Pupils will: * Practise and extend their use of the formal written methods of short multiplication and short division.
* Divide numbers up to 4 digits by a 1- digit number using the formal written method of short division and interpret remainders appropriately for the

context.* Interpret non-integer answers to division by expressing results in different ways according to the context, including with remainders, as fractions, as decimals or by rounding.

FRACTIONS* Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number.
* Pupils connect equivalent fractions > 1 that simplify to integers with division and other fractions > 1 to division with remainders.
* Pupils connect multiplication by a fraction to using fractions as operators (fractions of), and to division.
* Pupils should make connections between percentages, fractions and decimals
 | Understanding remainders | * Pupils use all four operations in problems involving time and money, including conversions.
* Use decimal notation, including scaling.
* Calculate and compare the area of rectangles (including squares) (MEASURES)
* Establish whether a number up to 100 is prime and recall prime numbers up to 19
* Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)
* Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes and including scaling by simple fractions and problems involving simple rates.
* Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. (NUMBER—MULTIPLICATION AND DIVISION)
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