## Essex Primary School Division calculation Policy

By the end of year 6, children will have a range of calculation methods, mental and written. Selection will depend upon the numbers involved.

Children should not be made to go onto the next stage if:

1) they are not ready.
2) they are not confident.

Children should be encouraged to approximate their answers before calculating.
Children should be encouraged to check their answers after calculation using an appropriate strategy.
Children should be encouraged to consider if a mental calculation would be appropriate before using written methods.

| Yr | Strategy | Exemplar |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathrm{R} / 1$ | Sharing |  |
| 10s and later in 5 s. |  |  |


|  | Grouping <br> As repeated <br> subtrion | Ensure that the emphasis in Y 3 is on grouping rather than sharing, and that children have a clear understanding of the difference between the two strategies.. <br> Children will continue to use: <br> Repeated subtraction using a number line <br> Children will use an empty number line to support their calculation. $24 \div 4=6$ <br> Children should also move onto calculations involving remainders. $13 \div 4=3 r 1$ <br> Using symbols to stand for unknown numbers to complete equations using inverse operations | Empty number lien |
| :---: | :---: | :---: | :---: |
|  | Repeated subtraction. <br> Short division $T U \div U$ | Children will develop their use of repeated subtraction to be able to subtract multiples of the divisor. Initially, these should be multiples of numbers with which the children are more familiar. $72 \div 5$ <br> Moving onto: <br> Then onto the vertical method: <br> $72 \div 3$ <br> Answer: 24 | Empty number line |


|  |  | Leading to subtraction of other multiples. $96 \div 6$ <br> Any remainders should be shown as integers, i.e. 14 remainder 2 or 14 r 2. <br> Children need to be able to decide what to do after division and round up or down accordingly. They should make sensible decisions about rounding up or down after division. For example $62 \div 8$ is 7 remainder 6 , but whether the answer should be rounded up to 8 or rounded down to 7 depends on the context. <br> e.g. I have 62p. Sweets are 8 p each. How many can I buy? <br> Answer: 7 (the remaining $6 p$ is not enough to buy another sweet) <br> Apples are packed into boxes of 8 . There are 62 apples. How many boxes are needed? <br> Answer: 8 (the remaining 6 apples still need to be placed into a box) |  |
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| 5 | Short division HTU $\div U$ | Children will continue to use written methods to solve short division $T U \div U$. <br> Children can start to subtract larger multiples of the divisor, e.g. $30 x$ $196 \div 6$ <br> Answer: $\quad 32$ remainder 4 or 32 r4 <br> Any remainders should be shown as integers, i.e. 14 remainder 2 or 14 r 2. <br> Children need to be able to decide what to do after division and round up or down accordingly. They should make sensible decisions about rounding up or down after division. For example $240 \div 52$ is 4 remainder 32 , but whether the answer should be rounded up to 5 or rounded down to 4 depends on the context. <br> Any remainders should be shown as fractions, i.e. if the children were dividing 32 by 10 , the answer should be shown as $3 \frac{2}{10}$ which could then be written as $3 \frac{1}{5}$ in it's lowest terms. |  |


|  |  | Extend to decimals with up to two decimal places. Children should know that decimal points line up under each other. <br> $87.5 \div 7$ <br> Answer: 12.5 |  |
| :---: | :---: | :---: | :---: |
| 6 | Long division HTU $\div T U$ | Children will continue to use written methods to solve short division $\mathrm{TU} \div \mathrm{U}$ and $\mathrm{HTU} \div \mathrm{U}$, as well as understand when it's necessary to round up and down, become confident in using these $\backslash$ strategies when working with decimals. <br> $972 \div 36$ <br> Any remainders should be shown as fractions, i.e. if the children were dividing 32 by 10 , the answer should be shown as $3^{2} / 10$ which could then be written as $3 \frac{1}{5}$ in it's lowest terms. <br> Extend to decimals with up to two decimal places. Children should know that decimal points line up under each other. <br> $87.5 \div 7$ <br> Answer: 12.5 |  |

