Counting, partitioning and calculating

| Activity name | Learning objectives | Managing the homework |
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| A1 |  |  |
| Divide me <br> Estimate first, then divide a number by U or TU to reach a given target. | Use approximations, inverse operations and tests of divisibility to estimate and check results | Before: Remind the children of the importance of estimating before carrying out calculations. <br> After: Check through some of the children's answers. How did estimating first help them to decide which pair of numbers to divide? |
| Positive and negative <br> Use a number line to solve number sequence problems involving positive and negative integers. | Find the difference between a positive and a negative integer, or two negative integers | Before: Revise positive/negative number work. Remind the children to use the number line to physically count the steps. <br> After: Work through the answers. Which problems did the children find easiest/hardest? Discuss everyday uses of positive/negative numbers. |
| Guitar Genius <br> Order decimals with up to three places in the context of a computer game. | Order decimals with up to three places, and position them on the number line | Before: Brief the children on the technique for ordering decimals. <br> After: Check the answers with the class. Discuss any problems encountered. |
| Decimal dash! <br> Multiply and divide decimals in the context of a speed test. | Use knowledge of place value and multiplication facts to $10 \times 10$ to derive related multiplication and division facts involving decimals (for example, $0.8 \times 7$, $4.8 \div 6$ ) | Before: Tell the children that they will use their knowledge of multiplication and related division facts to complete this activity. <br> After: Go through the answers and compare times for successfully completed tests. |
| A2 |  |  |
| One of each <br> Pair numbers and multiply them on the calculator to find given totals. | - Solve problems involving decimals; choose and use appropriate calculation strategies, including calculator use <br> - Use a calculator to solve problems | Before: Explain that one number has to be taken from each set of shapes to make the given total. Encourage the children to make a sensible guess first. Check that calculators are available at home. <br> After: Check through the solutions. How accurate were the estimates? How did the estimates help the children to find the correct numbers? |
| On the grid <br> Approximate first and then use the grid method to work through examples of HTU $\times$ TU . | Use efficient written methods to multiply three-digit integers by a two-digit integer | Before: Ensure that the children fully understand the grid method. Work through the example on the sheet. <br> After: Discuss the advantages and disadvantages of the grid method. How does it compare with other methods the children have tried? |
| What's missing? <br> Look carefully at word problems and decide what information needs to be added in order to find each solution. Complete the calculations using own information. | Solve multi-step problems and problems involving decimals; choose and use appropriate calculation strategies at each stage, including calculator use | Before: Revise the step-by-step approach used for solving problems. Remind the children that they will have to provide some of their own numbers to find the solution. <br> After: Check through the information the children provided themselves. How many variations are there for each question? Discuss the methods used to find solutions. |
| Missing digits <br> Substitute missing digits in number sentences involving decimal numbers. | Use efficient written methods to multiply and divide integers and decimals by a one-digit integer, and to multiply two-digit and three-digit integers by a two-digit integer | Before: Ensure that the children have a clear understanding of the four operations using decimal numbers. Talk to them about finding missing numbers, often using the inverse operation. <br> After: Go through the questions and discuss the various strategies the children used. How did they check their answers? |

