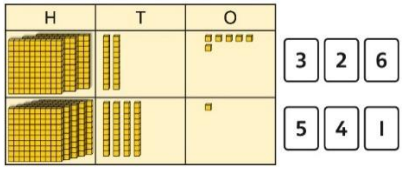
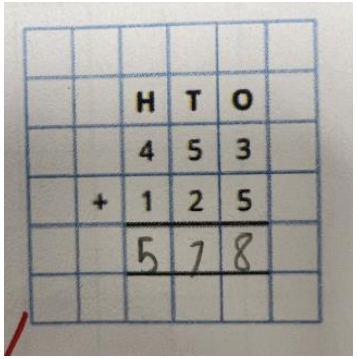
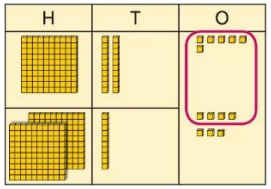
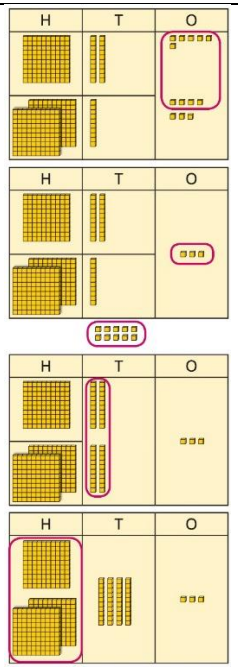
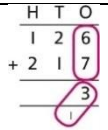
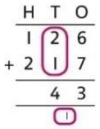
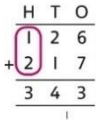
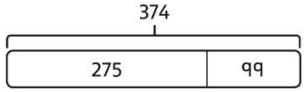
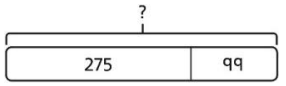
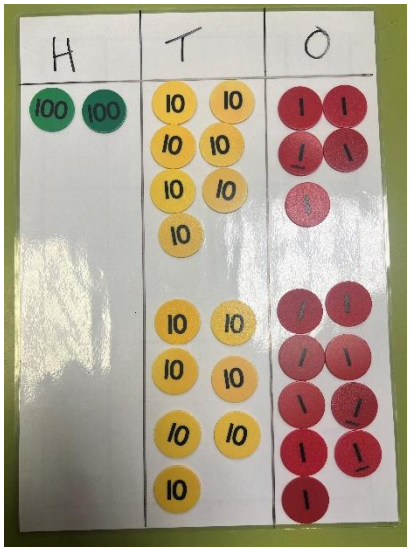
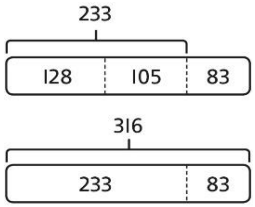
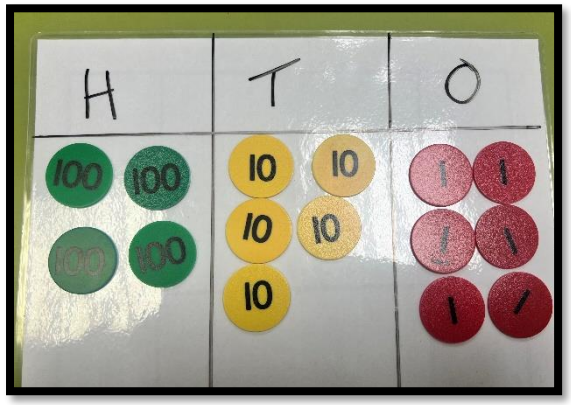
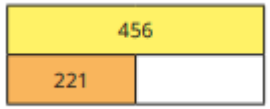
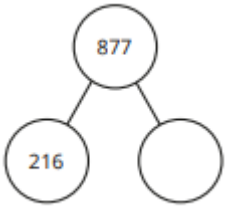
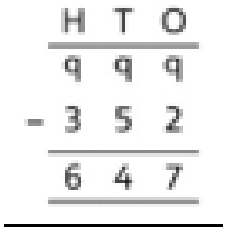
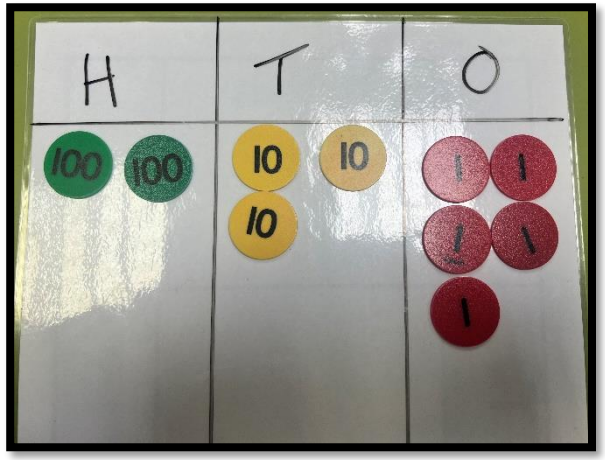
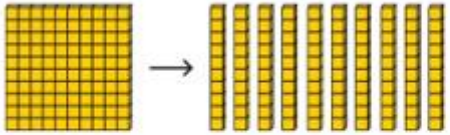
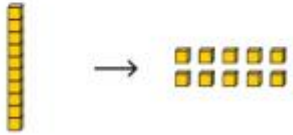
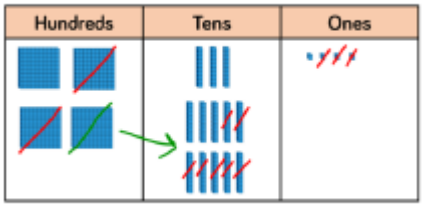
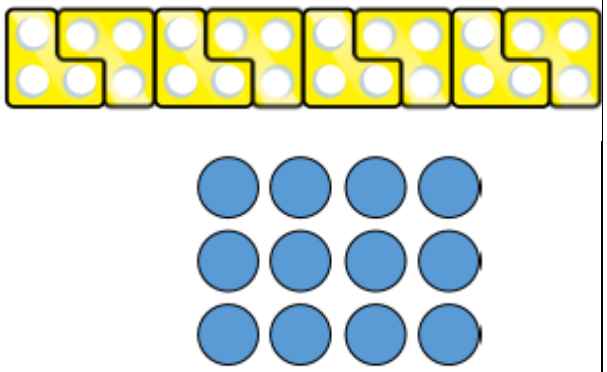
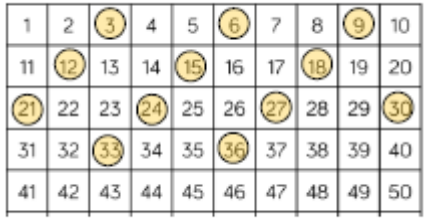
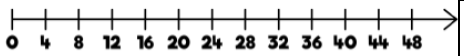
Y3 Addition			
Concept	Concrete	Pictorial	Abstract
Add numbers with up to three digits using the formal written method of column addition- no regrouping	Use place value equipment to make a representation of a calculation. This may or may not be structured in a place value grid. *326 + 541 is represented as:* 	Represent the place value grid with equipment to model the stages of column addition.	Use a column method to solve efficiently, using known bonds. Children must understand how this relates to place value at every stage of the calculation. 
Add numbers with up to three digits using the formal written method of column addition- with regrouping	Use place value equipment to enact the exchange required.  *There are 13 ones.* *I will exchange 10 ones for 1 ten.*	Model the stages of column addition using place value equipment on a place value grid.	Use column addition, ensuring understanding of place value at every stage of the calculation.

			   *126 + 217 = 343* Note: Children should also study examples where exchange is required in more than one column, for example *185 + 318 = ?*
Representing addition problems, and selecting appropriate methods	Encourage children to use their own drawings and choices of place value equipment to represent problems with one or more steps. These representations will help them to select appropriate methods. 275 + 99 =	Children understand and create bar models to represent addition problems. *275 + 99 = ?*  *275 + 99 = 374*	Use representations to support choices of appropriate methods.  *I will add 100, then subtract 1 to find the solution.* *128 + 105 + 83 = ?* *I need to add three numbers.*

			128 + 105 = 233 

Y3 Subtraction			
Concept	Concrete	Pictorial	Abstract
Subtract numbers with up to three digits using formal written methods of column subtraction ***without*** exchange.	Model 456- 221 using place value counters  The first picture shows 456. The second picture shows 2 hundreds, 2 tens and 1 one being taken physically away.	  	

			
Subtract numbers with up to three digits using formal written methods of column subtraction ***with*** exchange.	Use equipment to enact the exchange of 1 hundred for 10 tens, and 1 ten for 10 ones.  		$\begin{array}{r} {}^{3}\not{4}\,{}^{1}\not{3}5 \\ -\ 273 \\ \hline 162 \end{array}$

Y3 Multiplication			
Concept	Concrete	Pictorial	Abstract
Recall and use multiplication and division facts for the 3x tables			1 x 3 = 3 2 x 3 = 6 3 x 3 = 9
Recall and use multiplication and division facts for the 4x tables			3 x 4 = 12 4 x 4 = 16 5 x 4 = 20

<table>
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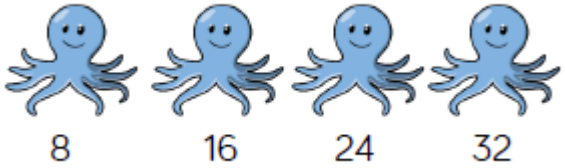
<td>Recall and use multiplication and division facts for the 8x tables</td>
<td> 
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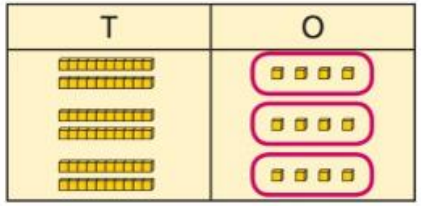
<tr><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td></tr>
<tr><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td></tr>
<tr><td>31</td><td>32</td><td>33</td><td>34</td><td>35</td><td>36</td><td>37</td><td>38</td><td>39</td><td>40</td></tr>
<tr><td>41</td><td>42</td><td>43</td><td>44</td><td>45</td><td>46</td><td>47</td><td>48</td><td>49</td><td>50</td></tr>
<tr><td>51</td><td>52</td><td>53</td><td>54</td><td>55</td><td>56</td><td>57</td><td>58</td><td>59</td><td>60</td></tr>
<tr><td>61</td><td>62</td><td>63</td><td>64</td><td>65</td><td>66</td><td>67</td><td>68</td><td>69</td><td>70</td></tr>
<tr><td>71</td><td>72</td><td>73</td><td>74</td><td>75</td><td>76</td><td>77</td><td>78</td><td>79</td><td>80</td></tr>
<tr><td>81</td><td>82</td><td>83</td><td>84</td><td>85</td><td>86</td><td>87</td><td>88</td><td>89</td><td>90</td></tr>
<tr><td>91</td><td>92</td><td>93</td><td>94</td><td>95</td><td>96</td><td>97</td><td>98</td><td>99</td><td>100</td></tr>
</table>
</td>
<td>5 x 8 = 40
6 x 8 = 48
7 x 8 = 42</td>
</tr>
<tr>
<td>Multiply 2-digit numbers by a one-digit number</td>
<td>Each person has 23 flowers.

Each person has 2 tens and 3 ones.

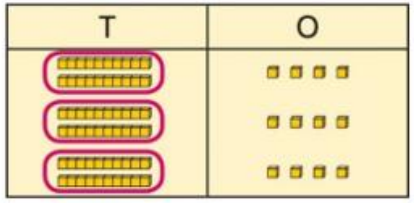
 

There are 3 groups of 2 tens.

There are 3 groups of 3 ones.</td>
<td>3 × 24 = ?

3 × 4 = 12

3 × 20 = 60

60 + 12 = 72

3 × 24 = 72</td>
<td>
<table>
<tr><td></td><td>H</td><td>T</td><td>O</td><td></td><td></td></tr>
<tr><td></td><td></td><td>3</td><td>4</td><td></td><td></td></tr>
<tr><td>×</td><td></td><td></td><td>5</td><td></td><td></td></tr>
<tr><td></td><td></td><td>2</td><td>0</td><td>(5 × 4)</td><td></td></tr>
<tr><td>+</td><td>1</td><td>5</td><td>0</td><td>(5 × 30)</td><td></td></tr>
<tr><td></td><td>1</td><td>7</td><td>0</td><td></td><td></td></tr>
</table>
</td>
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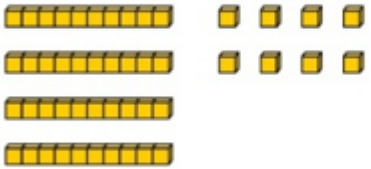
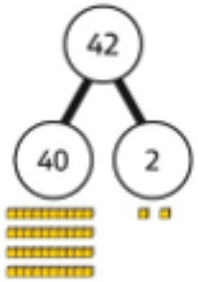
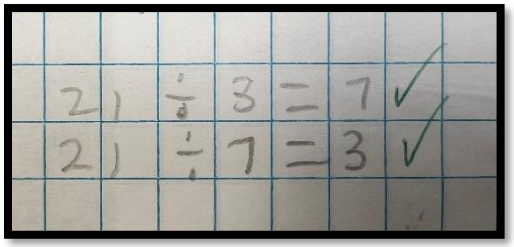
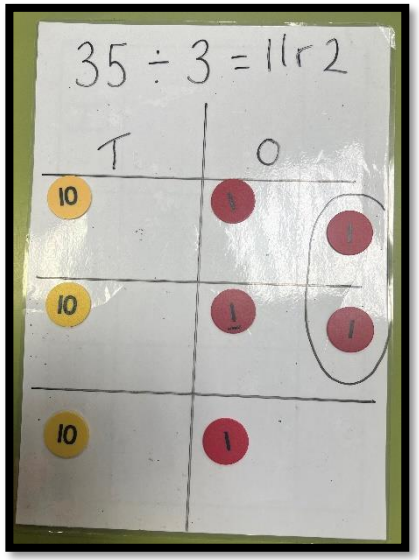
Y3 Division			
Concept	Concrete	Pictorial	Abstract
Divide a 2 digit number by a 1 digit number without an exchange	Children explore dividing 2-digit numbers by using place value equipment.  *48 ÷ 2 = ?*		
Divide a 2-digit number by 1-digit number with a remainder		*29 ÷ 2 = ?*  *29 ÷ 2 = 14 remainder 1*	*67 children try to make 5 equal lines.* *67 = 50 + 17* *50 ÷ 5 = 10* *17 ÷ 5 = 3 remainder 2* *67 ÷ 5 = 13 remainder 2* *There are 13 children in each line and 2 children left out.*