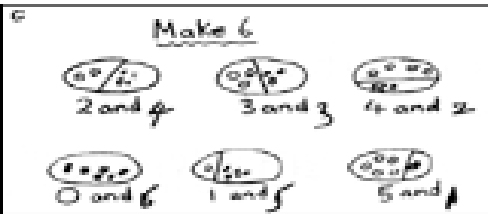


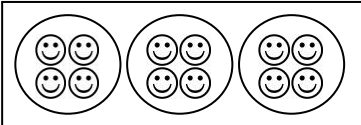
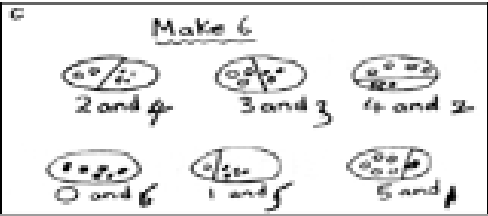


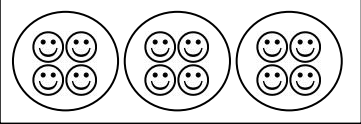


Kenmore Park Infant and Nursery School Progression in Calculation Policy

	Addition	Subtraction	Multiplication	Division
Reception	<p>Children are encouraged to develop a mental picture of the number system in their heads to use for calculation. They develop ways of recording calculations using pictures, etc.</p>  <p>Cubes can be used to illustrate addition.</p> <p>They use number tracks and practical resources to support calculation. Teachers demonstrate the use of the number track.</p>	<p>Children are encouraged to develop a mental picture of the number system in their heads to use for calculation. They develop ways of recording calculations using pictures etc.</p>  <p>Cubes can be used to illustrate subtraction.</p> <p>They use number tracks and practical resources to support calculation. Teachers demonstrate the use of the number track.</p>	<p>Children will experience equal groups of objects. They will count in 2s and 10s and begin to count in 5s. They will work on practical problem solving activities involving equal sets or groups.</p>  <p>Doubling is taught as part of multiplication.</p>	<p>Children will understand equal groups and share items out in play and problem solving. They will count in 2s and 10s and later in 5s.</p>  <p>Halving is taught as part of division.</p>

Kenmore Park Infant and Nursery School Progression in Calculation Policy

	Addition	Subtraction	Multiplication	Division
Year 1	<p>Using pictures</p>  <p>They use number tracks, numberlines and practical resources to support calculation and teachers demonstrate the use of the number track and the numberline.</p> <p>Children then begin to use numbered tracks or lines to support their own calculations using a numbered track or line to count on in ones.</p> <p>Children should also be taught use of the 100 square to support addition using counting on in ones along the rows and counting on in tens going down a column, both practically and then visualising a mental image.</p>	<p>Using pictures</p>  <p>Children then begin to use numbered tracks or lines to support their own calculations - using a numbered track or line to count back in ones.</p> <p>The number track or numberline should also be used to show that $6 - 3$ means the 'difference between 6 and 3' or 'the difference between 3 and 6' and how many jumps they are apart.</p> <p>Children should also be taught use of the 100 square to support subtraction using counting back in ones along the rows and counting back in tens going up a column, both practically and then visualising a mental image.</p>	<p>Children will experience equal groups of objects. They will count in 2s, 10s and later in 5s. They will work on practical problem solving activities involving equal sets or groups.</p>  <p>They will learn multiplication tables facts for the 2x, 5x and 10x tables.</p>	<p>Children will understand equal groups and share items out in play and problem solving. They will count in 2s, 10s and later in 5s.</p> 

Kenmore Park Infant and Nursery School Progression in Calculation Policy

Count on 3 $3 + 3 = 6$

Count on 10

$11 + 10 = 21$

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Partitioning

Children will be taught to partition numbers into tens and units (ones).

$17 = 10 + 7$ $26 = 20 + 6$


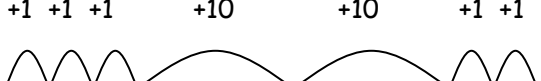
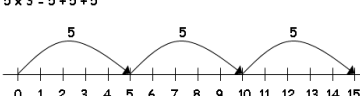
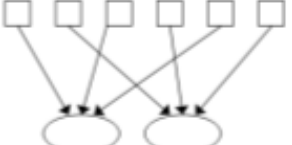


Count back 3 $8 - 3 = 5$

Count back 10

$13 - 3 = 10$

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Kenmore Park Infant and Nursery School Progression in Calculation Policy

	Addition	Subtraction	Multiplication	Division
Year 2	<p>Children will be taught to partition 2-digit numbers into tens and units (ones). $59=50+9$</p> <p>Children are taught when adding two digit numbers to partition into tens and units then add the tens first, followed by the units.</p> <p>$23 + 34 =$ $20 + 3$ $30 + 4$ $20 + 30 = 50$ $3 + 4 = 7$ $50 + 7 = 57$</p> <p>Children should also be taught use of the 100 square to support addition using counting on in ones along the rows and in tens down the columns, both practically and then visualising a mental image.</p>	<p>Children will begin to use empty number lines to support calculations.</p> <p>If the difference between two numbers is small then counting on will be taught as a method. Initially without bridging ten.</p> <p>$40 - 27 =$</p>  <p>27 30 40</p> <p>Progressing onto numbers which bridge ten.</p> <p>$42 - 17 =$</p>  <p>17 20 30 40 42</p> <p>Children should also be taught use of the 100 square to support subtraction using counting back in ones along the rows and in tens up the columns, both practically and then visualising a mental image.</p>	<p>Children will develop their understanding of multiplication and use jottings to support calculation:</p> <p>Repeated addition 3 times 5 is $5 + 5 + 5 = 15$ or 3 lots of 5 or 5×3</p> <p>Repeated addition can be shown easily on a number line:</p>  <p>$5 \times 3 = 5 + 5 + 5$</p> <p>Commutativity Children should know that 3×5 has the same answer as 5×3.</p> <p>Arrays Children should be able to model a multiplication calculation using an array. This knowledge will support with the development of the grid method.</p>	<p>Children will develop their understanding of division and use jottings to support calculation</p> <p>Sharing equally 6 sweets shared between 2 people, how many do they each get?</p>  <p>Grouping or repeated subtraction There are 6 sweets, how many people can have 2 sweets each?</p>  <p>Repeated subtraction using a number line</p> <p>$12 \div 3 = 4$</p> 

Kenmore Park Infant and Nursery School Progression in Calculation Policy

<p>+ 20</p> <p>31 + 20 = 51</p> <table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr> <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> <p style="text-align: center;">+ 4 93 + 4 = 97</p> <p>Using symbol to stand for unknown numbers to complete equations using inverse operations.</p> <p>$\square + 2 = 4$ $4 + \triangle = 20$ $\square + \triangle = 12$</p>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	<table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr> <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> <p style="text-align: right;">- 30 58-30= 28</p> <p style="text-align: right;">- 7 78-7=71</p> <p>Using symbols to stand for unknown numbers to complete equations using inverse operations.</p> <p>$\square - 2 = 4$ $20 + \triangle = 16$ $\square + \triangle = 12$</p>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	<div style="text-align: center;"> </div> <p>Using symbols to stand for unknown numbers to complete equations using inverse operations.</p> <p>$\square \times 2 = 4$ $4 \times \triangle = 20$</p> <p>$\square \times \triangle = 12$</p> <p>Children will learn multiplication tables and table facts for 2x, 10x, 5x, 3x, 4x tables.</p>	<p>Using symbols to stand for unknown numbers to complete equations using inverse operations</p> <p>$\square \div 2 = 4$ $20 \div \triangle = 4$</p> <p>$\square \div \triangle = 4$</p>
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