

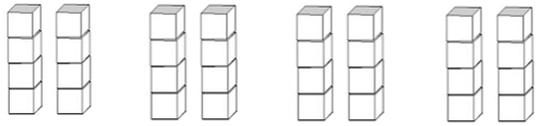
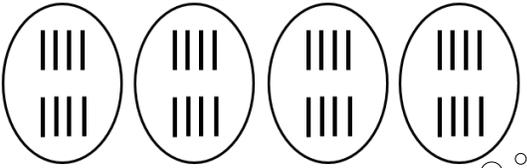
# Grade 3 Important Math Information

## *Multiplication as Repeated Addition*

Dear Family,

We are beginning a new unit of study called *Multiplication as Repeated Addition*. In this unit of study, students will develop an understanding that we use multiplication to combine a number of equal groups. By the end of Grade 3, it is expected that students will know and use all multiplication combinations for any two one-digit numbers. The specific learning goals your student will be working toward are listed below with examples of student work showing understanding of each learning goal.

**Learning Goal:** Represent and solve multiplication situations involving equal groups and be able to explain the strategies used.

Example Problem	Example Student Solutions	
<p>Maria has 4 boxes of crayons. There are 8 crayons in each box. How many crayons does Maria have in all?</p>	<p style="text-align: center;"><u>Use Objects</u></p>  <p style="text-align: center;">“I counted out 4 groups of 8 cubes. That makes 32 cubes.”</p>	<p style="text-align: center;"><u>Draw a Picture</u></p>  <p style="text-align: center;">“I drew a picture of 4 groups of 8 and counted each crayon for a total of 32.”</p>
	<p style="text-align: center;"><u>Repeated Addition</u></p> <p style="text-align: center;"><math>8 + 8 + 8 + 8 = 32</math></p> <p style="text-align: center;">“Each box has 8 crayons, so I added four 8’s to get 32.”</p>	<p style="text-align: center;"><u>Skip Counting</u></p> <p style="text-align: center;">8, 16, 24, 32</p> <p style="text-align: center;">“I counted by 8 four times to get to 32.”</p>

**Learning Goal:** Identify and explain multiplication patterns on the 100 chart.

Example Problem	Example Student Solutions																																																																																																					
<p>What do you notice about multiples of 5?</p>	<table border="1" style="width: 100%; text-align: center;"> <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>	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	<p>Multiples of 5 have either a 0 or 5 in the ones place.</p> <p>An even number of groups of 5 make an even number. Example: <math>4 \times 5 = 20</math></p> <p>An odd number of groups of 5 make an odd number. Example: <math>3 \times 5 = 15</math></p>
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**Mathematical Thinking and Practices Learning Goal:** Represent and solve problems using various appropriate models.

**Things you can do at home to support your child throughout this unit of study:**

**Look around your house** and find things that come in groups (eggs, juice boxes, crayons, etc.). Create math problems about the groups of items. *For example, Eggs come in groups of 12. If there are three cartons of eggs, how many total eggs are there?*

**Skip Count-** What number would we land on if everyone in the family counted by 5's (5, 10, 15, 20, etc...)? What would happen if we counted by 5's and everyone had two turns?

**Go to the library** and check out these math books:

- *Each Orange Had 8 Slices* by Paul Giganti Jr.
- *Two of Everything: A Chinese Folktale* by Lily Toy Hong
- *One Hundred Hungry Ants* by Elinor J Pinczes