

## Year 5 Multiplication and Division Knowledge Organiser.

Multiplication and Division		Knowledge Organiser																																																																																																				
Key Vocabulary	Factors	Prime Numbers																																																																																																				
multiply	<p>A factor is a number that divides into another number exactly, without leaving a remainder.</p> <div style="text-align: center;"> </div> <div style="text-align: center; margin-top: 10px;"> <p>The factors of 20 are 1, 2, 4, 5, 10 and 20.</p> <p>The factor pairs are:</p> <ul style="list-style-type: none"> <li>1 and 20</li> <li>2 and 10</li> <li>4 and 5</li> </ul> </div> <div style="text-align: center; margin-top: 10px;"> <p>A common factor is a factor of 2 or more numbers.</p> </div>	<table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <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
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## Multiplication and Division

## Knowledge Organiser

### Short Multiplication

$$2543 \times 7 = 17801$$

	2	5	4	3
×				7
<b>1</b>	<b>7</b>	<b>8</b>	<b>0</b>	<b>1</b>
1	3	3	2	

Remember to move any regrouped digits into the next column. After the next multiplication, add the regrouped number to the answer.

### Long Multiplication

$$2543 \times 67 = 170381$$

		2	5	4	3	
	×			6	7	
		1	7	8	0	1
1	5	2	5	8	0	
1	3	2	1			
<b>1</b>	<b>7</b>	<b>0</b>	<b>3</b>	<b>8</b>	<b>1</b>	
1	1					

Before multiplying by the number in the tens column, remember to use zero as a placeholder because the 6 in 67 is 6 tens (60).

### Division

$$136 \div 4 = 34$$

		3	4	
4		1	3	6
-		1	2	0
		1	6	
	-	1	6	
			0	

→  $30 \times 4$

→  $4 \times 4$



### Short Division

		3	8	
4		1	5	2

$15 \div 4 = 3$  remainder 3

Remember to regroup any remainders and move them into the next column.

		4	5	5	r	3
5		2	2	7	8	

$28 \div 5 = 5$  remainder 3

If your calculation has a remainder, remember to record it in the answer using the letter **r**.