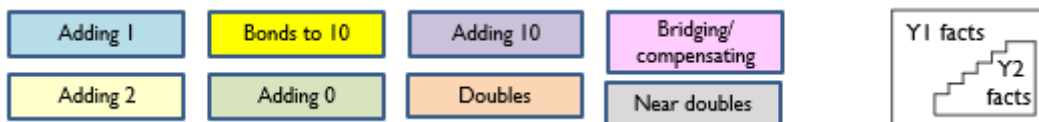


Progression in Number bonds within 20

Fluency in number is key to accessing all areas of mathematics confidently and securely. Knowing and recalling number facts frees up space in a child's working memory when they complete more complex calculations and allows children to reason and problem solve with greater depth, which alongside fluency, are the key elements of the mathematics curriculum.

The aim is to recall each fact within the set within 3 seconds. Children will need to recall all the facts in each phase before moving to the next. These facts should be learnt at home and in school. Children should aim to complete all of the phases before the end of Year 2.



+	0	1	2	3	4	5	6	7	8	9	10
0	0+0	0+1	0+2	0+3	0+4	0+5	0+6	0+7	0+8	0+9	0+10
1	1+0	1+1	1+2	1+3	1+4	1+5	1+6	1+7	1+8	1+9	1+10
2	2+0	2+1	2+2	2+3	2+4	2+5	2+6	2+7	2+8	2+9	2+10
3	3+0	3+1	3+2	3+3	3+4	3+5	3+6	3+7	3+8	3+9	3+10
4	4+0	4+1	4+2	4+3	4+4	4+5	4+6	4+7	4+8	4+9	4+10
5	5+0	5+1	5+2	5+3	5+4	5+5	5+6	5+7	5+8	5+9	5+10
6	6+0	6+1	6+2	6+3	6+4	6+5	6+6	6+7	6+8	6+9	6+10
7	7+0	7+1	7+2	7+3	7+4	7+5	7+6	7+7	7+8	7+9	7+10
8	8+0	8+1	8+2	8+3	8+4	8+5	8+6	8+7	8+8	8+9	8+10
9	9+0	9+1	9+2	9+3	9+4	9+5	9+6	9+7	9+8	9+9	9+10
10	10+0	10+1	10+2	10+3	10+4	10+5	10+6	10+7	10+8	10+9	10+10

Phase	Addition Skill	Facts to learn	Please note																
1	Adding One	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">2 + 1</td> <td style="width: 50%;">1 + 2</td> </tr> <tr> <td>3 + 1</td> <td>1 + 3</td> </tr> <tr> <td>4 + 1</td> <td>1 + 4</td> </tr> <tr> <td>5 + 1</td> <td>1 + 5</td> </tr> <tr> <td>6 + 1</td> <td>1 + 6</td> </tr> <tr> <td>7 + 1</td> <td>1 + 7</td> </tr> <tr> <td>8 + 1</td> <td>1 + 8</td> </tr> </table>	2 + 1	1 + 2	3 + 1	1 + 3	4 + 1	1 + 4	5 + 1	1 + 5	6 + 1	1 + 6	7 + 1	1 + 7	8 + 1	1 + 8	It is important for the children to look at these in order to learn the pattern and make connections. They should also be able to know them out of sequence and they will be tested in a random order.		
2 + 1	1 + 2																		
3 + 1	1 + 3																		
4 + 1	1 + 4																		
5 + 1	1 + 5																		
6 + 1	1 + 6																		
7 + 1	1 + 7																		
8 + 1	1 + 8																		
2	Doubles to 10	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1 + 1</td> <td style="width: 50%;">Double 1</td> </tr> <tr> <td>2 + 2</td> <td>Double 2</td> </tr> <tr> <td>3 + 3</td> <td>Double 3</td> </tr> <tr> <td>4 + 4</td> <td>Double 4</td> </tr> <tr> <td>5 + 5</td> <td>Double 5</td> </tr> </table>	1 + 1	Double 1	2 + 2	Double 2	3 + 3	Double 3	4 + 4	Double 4	5 + 5	Double 5	It is important for the children to look at these in order to learn the pattern and make connections. They should also be able to know them out of sequence and they will be tested in a random order.						
1 + 1	Double 1																		
2 + 2	Double 2																		
3 + 3	Double 3																		
4 + 4	Double 4																		
5 + 5	Double 5																		
3	Adding 2	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1 + 2</td> <td style="width: 50%;">2 + 1</td> </tr> <tr> <td>2 + 2</td> <td>2 + 2</td> </tr> <tr> <td>3 + 2</td> <td>2 + 3</td> </tr> <tr> <td>4 + 2</td> <td>2 + 4</td> </tr> <tr> <td>5 + 2</td> <td>2 + 5</td> </tr> <tr> <td>6 + 2</td> <td>2 + 6</td> </tr> <tr> <td>7 + 2</td> <td>2 + 7</td> </tr> <tr> <td>8 + 2</td> <td>2 + 8</td> </tr> </table>	1 + 2	2 + 1	2 + 2	2 + 2	3 + 2	2 + 3	4 + 2	2 + 4	5 + 2	2 + 5	6 + 2	2 + 6	7 + 2	2 + 7	8 + 2	2 + 8	It is important for the children to look at these in order to learn the pattern and make connections. They should also be able to know them out of sequence and they will be tested in a random order.
1 + 2	2 + 1																		
2 + 2	2 + 2																		
3 + 2	2 + 3																		
4 + 2	2 + 4																		
5 + 2	2 + 5																		
6 + 2	2 + 6																		
7 + 2	2 + 7																		
8 + 2	2 + 8																		

		9 + 2	2 + 9	
4	Number bonds to 10	0 + 10 1 + 9 2 + 8 3 + 7 4 + 6 5 + 5	6 + 4 7 + 3 8 + 2 9 + 1 10 + 0	It is important for the children to look at these in order to learn the pattern and make connections. They should also be able to know them out of sequence and they will be tested in a random order. This phase will be tested by missing number calculations e.g. $6 + \underline{\quad} = 10$.
5	Doubles to 20	6 + 6 7 + 7 8 + 8 9 + 9 10 + 10	Double 6 Double 7 Double 8 Double 9 Double 10	It is important for the children to look at these in order to learn the pattern and make connections. They should also be able to know them out of sequence and they will be tested in a random order.
6	Adding 10	1 + 10 2 + 10 3 + 10 4 + 10 5 + 10 6 + 10 7 + 10 8 + 10 9 + 10 10 + 10	10 + 1 10 + 2 10 + 3 10 + 4 10 + 5 10 + 6 10 + 7 10 + 8 10 + 9	It is important for the children to look at these in order to learn the pattern and make connections. They should also be able to know them out of sequence and they will be tested in a random order.
7	Adding 0	1 + 0 2 + 0 3 + 0 4 + 0 5 + 0 6 + 0 7 + 0 8 + 0 9 + 0	0 + 1 0 + 2 0 + 3 0 + 4 0 + 5 0 + 6 0 + 7 0 + 8 0 + 9	It is important for the children to look at these in order to learn the pattern and make connections. They should also be able to know them out of sequence and they will be tested in a random order. This may seem a relatively easy phase to master quickly however it is essential children can recall them instantly.
8	Near doubles	2 + 1 3 + 2 4 + 3 5 + 4 6 + 5 7 + 6 8 + 7 9 + 8	1 + 2 2 + 3 3 + 4 4 + 5 5 + 6 6 + 7 7 + 8 8 + 9	It is important for the children to look at these in order to learn the pattern and make connections. They should also be able to know them out of sequence and they will be tested in a random order. Children should be encouraged to build on their knowledge of doubling numbers to help with these calculations e.g. $3 + 3 = 6$ so $3 + 4$ must equal 7 because there is one more.
9	Bridging and compensating	8 + 3 9 + 3 7 + 4 8 + 4 9 + 4 7 + 5 8 + 5 8 + 6 9 + 5 9 + 6	3 + 8 3 + 9 4 + 7 4 + 8 4 + 9 5 + 7 5 + 8 6 + 8 5 + 9 6 + 9	It is important for the children to look at these in order to learn the pattern and make connections. They should also be able to know them out of sequence and they will be tested in a random order. Children should be encouraged to 'split up' one of the numbers in the calculation to help them to reach 10, and then add what is left e.g. $7 + 4$ can be learnt as $7 + 3 = 10$, plus one more to make 11

