

Foundation (Basic) Facts for Year 1 Students

By the **end** of Year 1, the expectation is that your child would know these foundation facts. They would begin learning these using equipment and objects, joining the sets together and counting them. Over the year and through lots of practice, the aim is for your child to know these facts so they can answer them when they see the equation written down, when they are asked verbally or when they need to solve a problem using these facts. Please note, your child will not be learning the facts in the order listed below, we jumble them up.

Addition

The following facts are what your child needs to work on throughout their first year of schooling.

Addition facts to 5. This means any single digit addition facts that have an answer that is no greater than 5. Below are the facts they will be working on:

2	3	4	5
1 + 1	1 + 2 2 + 1	1 + 3 2 + 2 3 + 1	1 + 4 2 + 3 3 + 2 4 + 1

+	1	2	3	4
1	2	3	4	5
2	3	4	5	
3	4	5		
4	5			

Help your child notice patterns in the facts they are learning:

- the order of the numbers being added does not change the answer. For example: $3 + 1$ and $1 + 3$ both equal 4.
- adding one to a number gives us the next counting number.
- the facts are a triplet (2, 3, and 5). Talk about the equations they can write for the triplet and find the patterns. They are $2 + 3 = 5$, $3 + 2 = 5$ so $5 - 2 = 3$, $5 - 3 = 2$.

Subtraction

No subtraction facts are taken to fluency at this level. However, some students may receive some subtraction facts if teachers feel they are ready for this.

Multiplication and Division

No multiplication and division facts are learnt at this level. However, to help your child begin to think multiplicatively you can practice skip counting in twos and fives. Do this by counting physical objects such as pegs, buttons, Lego pieces, etc in groups and counting aloud:

- 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, ...
- 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, ...

Next Steps

If you notice that your child can automatically answer questions involving the foundation facts to five, the next step is to begin working on facts up to 10. This means any single digit addition facts that have an answer that is no greater than 10.

Foundation (Basic) Facts for Year 2 Students

By the **end** of Year 2, the expectation is that your child would know these foundation facts. They would begin learning these using equipment and objects, joining the sets together and counting them. Over the year and through lots of practice, the aim is for your child to know these facts so they can answer them when they see the equation written down, when they are asked verbally or when they need to solve a problem using these facts. Please note, your child will not be learning the facts in the order listed below, we jumble them up.

Addition

Addition facts to 10. This means any single digit addition facts that have an answer that is no greater than 10. Below are the facts they will be working on which are building on from what they have learnt at Year 1.

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

+	1	2	3	4	5	6	7	8	9
1	2	3	4	5	6	7	8	9	10
2	3	4	5	6	7	8	9	10	
3	4	5	6	7	8	9	10		
4	5	6	7	8	9	10			
5	6	7	8	9	10				
6	7	8	9	10		12			
7	8	9	10				14		
8	9	10						16	
9	10								18

Help your child notice the patterns in the facts they are learning:

- doubles to 10. This means addition facts where the same number is added to itself (these are shown in bold in the tables above).
- the order of the numbers being added does not change the answer. For example: $6 + 3$ and $3 + 6$ both equal 9.
- the facts are a triplet (3, 4 and 7). Talk about the equations they can learn for the triplet and find the patterns. They are $3 + 4 = 7$, $4 + 3 = 7$ so $7 - 3 = 4$, $7 - 4 = 3$.

Subtraction

Subtraction from 5. This means any single digit subtraction facts where the answer is no less than 1.

Multiplication and Division

No multiplication and division facts are learnt at this level. However, to help your child begin to think multiplicatively you can practice skip counting in twos and fives. Do this by counting physical objects such as pegs, buttons, Lego pieces, etc in groups and counting aloud:

- 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, ...
- 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, ...
- you could also introduce counting in threes and fours.

Next Steps

When your child has fluency with addition facts, ask them a related subtraction fact. For example: if they know $5 + 4 = 9$, connect this to $9 - 5 = 4$ and $9 - 4 = 5$. The above facts are crucial for success in Year 3. Resist the temptation to move on – ensure your child knows all the facts above.

Foundation (Basic) Facts for Year 3 Students

By the **end** of Year 3, the expectation is that your child would know these foundation facts. They will be learning these in a variety of ways that include games and different strategies they can use. Over the year and through lots of practice, the aim is for your child to know these so they can answer them when they see the equation written down, when they are asked verbally or when they need to solve a problem using these facts. Please note, your child will not be learning the facts in the order listed below, we jumble them up.

Addition

Addition facts to 18. This means any single digit addition facts that have an answer that is no greater than 18. The highlighted/shaded facts are ones your child will be learning. The others are ones they should know already and should continue to practice.

+	1	2	3	4	5	6	7	8	9
1	2	3	4	5	6	7	8	9	10
2	3	4	5	6	7	8	9	10	11
3	4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12	13
5	6	7	8	9	10	11	12	13	14
6	7	8	9	10	11	12	13	14	15
7	8	9	10	11	12	13	14	15	16
8	9	10	11	12	13	14	15	16	17
9	10	11	12	13	14	15	16	17	18

Help your child notice patterns in the facts they are learning:

- the order of the numbers being added does not change the answer. For example: $4 + 8$ and $8 + 4$ both equal 12.
- near doubles – if you know $6 + 6 = 12$ then $6 + 7 = 13$ because 7 is one more than 6
- the facts are a triplet (7, 8 and 15). Talk about the equations they can learn for the triplet and find the patterns. They are $7 + 8 = 15$, $8 + 7 = 15$, $15 - 7 = 8$ and $15 - 8 = 7$.
- adding nine is one less than adding 10. For example: $10 + 6 = 16$, so $9 + 6 = 15$.

Subtraction

Subtraction from 10 should be taken to fluency. This means any single digit subtraction facts where the answer is not less than 1.

Multiplication and Division

No multiplication and division facts are taken to fluency at this level. To prepare your child for multiplication, practice skip counting in twos, fives, threes, and fours.

Next Steps

When your child has fluency with addition facts, ask them a related subtraction facts. For example: if they know $8 + 4 = 12$, connect this to $12 - 8 = 4$ and $12 - 4 = 8$. The shaded facts above are crucial for success in Year 4 and beyond. Resist the temptation to move on – ensure your child knows all the addition and subtraction facts above automatically.



Foundation (Basic) Facts for Year 4 Students

By the **end** of Year 4, the expectation is that your child would know these foundation facts. They will be learning these in a variety of ways that include games and different strategies they can use. Over the year and through lots of practice, the aim is for your child to know these so they can answer them when they see the equation written down, when they are asked verbally or when they need to solve a problem using these facts. Please note, your child will not be learning the facts in the order listed below, we jumble them up.

Addition

Addition facts to 18. This means any single digit addition facts that have an answer that is no greater than 18. The highlighted/shaded facts are ones your child will be learning and taking to fluency. The others are ones they should know already and continue practicing.

+	1	2	3	4	5	6	7	8	9
1	2	3	4	5	6	7	8	9	10
2	3	4	5	6	7	8	9	10	11
3	4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12	13
5	6	7	8	9	10	11	12	13	14
6	7	8	9	10	11	12	13	14	15
7	8	9	10	11	12	13	14	15	16
8	9	10	11	12	13	14	15	16	17
9	10	11	12	13	14	15	16	17	18

Subtraction

Subtraction from 10 should be taken to fluency. If your child knows these subtraction facts, then begin to work on subtraction facts from 18. Facts are found in the addition array above.

Multiplication

Multiplication facts for the two and five times tables. The multiplication of the ten times tables is what they learn as part of their place value knowledge but are also key facts for them to know. The multiplication array shows the facts they will be working on.

×	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
5	5	10	15	20	25	30	35	40	45	50
10	10	20	30	40	50	60	70	80	90	100

Help your child learn the triplet for each fact. For example: for the triplet 2, 5, 10, talk about the four equations they can learn. They are: $2 \times 5 = 10$, $5 \times 2 = 10$, $10 \div 2 = 5$ and $10 \div 5 = 2$.

Next Steps

Resist the temptation to move on until your child has fluency with all their addition and subtraction facts to 18 as they are essential for success in coming years. To assist with multiplication, continue to practice skip counting in threes and fours. You could also introduce skip counting in sixes and nines if you feel they are ready for this.

Foundation (Basic Facts) for Year 5 Students

By the **end** of Year 5, the expectation is that your child would know these foundation facts. They will be learning these in a variety of ways that include games and different strategies they can use. Over the year and through lots of practice, the aim is for your child to know these so they can answer them when they see the equation written down, when they are asked verbally or when they need to solve a problem using these facts. Please note, your child will not be learning the facts in the order shown below, we jumble them up.

Addition

All addition facts to 18 should be learnt by this time in their schooling. It is important to keep practicing recall of these facts.

Subtraction

Subtraction from 18. This means any single digit subtraction facts where the answer is no less than 1. The array shows the facts they should be taking to fluency.

+	1	2	3	4	5	6	7	8	9
1	2	3	4	5	6	7	8	9	10
2	3	4	5	6	7	8	9	10	11
3	4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12	13
5	6	7	8	9	10	11	12	13	14
6	7	8	9	10	11	12	13	14	15
7	8	9	10	11	12	13	14	15	16
8	9	10	11	12	13	14	15	16	17
9	10	11	12	13	14	15	16	17	18

Multiplication

Multiplication facts for the three, four and nine times tables. The highlighted/shaded facts below are the facts they will be working on. The other facts are ones they should keep practicing.

×	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Help your child learn the triplet for each fact. For example: for the triplet 4, 3, 12, talk about the four equations they can learn. They are: $4 \times 3 = 12$, $3 \times 4 = 12$, $12 \div 4 = 3$ and $12 \div 3 = 4$.

Next Steps

Continue to provide your child with lots of opportunities to use their addition and subtraction facts by playing maths games as they are essential for success in coming years. To assist with multiplication, you could introduce skip counting in sevens and eights. Explore the patterns you find in the skip counting patterns. What do you notice about odd and even numbers?



Foundation (Basic Facts) for Year 6 Students

By the **end** of Year 6, the expectation is that your child would know these foundation facts. They will be learning these in a variety of ways that include games and different strategies they can use. Over the year and through lots of practice, the aim is for your child to learn these so they can answer them when they see the equation written down, when they are asked verbally or when they need to solve a problem using these facts. Please note, your child will not be learning the facts in the order listed below, we jumble them up.

Addition

All addition facts to 18 should be learnt by this time in their schooling. Continue to practice these facts by playing foundation (basic) fact games.

Subtraction

Please refer to these on the Year 5 sheet as they have a two-year timeframe (Years 5 and 6) to learn the facts listed for subtraction.

Multiplication

Multiplication facts for the six, seven and eight times tables. The highlighted/shaded facts below are the facts they will be working on. The other facts are ones they should keep practicing.

×	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Help your child learn the triplet for each fact. For example: for the triplet 6, 8, 48, talk about the four equations they can learn. They are: $6 \times 8 = 48$, $8 \times 6 = 48$, $48 \div 6 = 8$ and $48 \div 8 = 6$.

Division

Division of the two and five times tables. The division of the ten times tables are what they learn as part of their place value knowledge but are also key facts for them to know.

Next Steps – Notice Patterns

To be successful at Level Four of the New Zealand Curriculum – in Year 7 and 8 it is important that your child can recall the times table facts in the table above. Explore with your child the patterns found in each of the tables. For example: the even times tables all have even products (answers), all the products in the five times table have either 5 or 0 in the ones digit. What other patterns can you find? Learn the *square* facts pattern – 1, 4, 9, 16, 25, 36, 49, 64, 81, 100. What do you notice?