Welcome to Topic 3: Understanding Numbers

Types of numbers we will look at:
- Nominal/Cardinal/Ordinal numbers;
- Positive/Negative numbers;
- Integers/Whole numbers;
- Rational/Irrational;
- Prime/Composite;
- Factors/Multiples;
- Square numbers/Triangular numbers

To help our understanding of numbers it is very useful to be aware of the many types of numbers that exist. We may not use all of these types of numbers in everyday situations, although in other contexts, we might. This presentation will treat some of them.

Go through each slide carefully, read them and go to the “more information and activity” links to ensure you fully understand what each type of number means. Some of them may not be new to you but they all go toward understanding the building blocks of mathematics.
Nominal Numbers

Nominal – is a word used to describe the name of the number.

“Nominal” simply means “name”! In simplest terms it is the number! Knowing both the face and place values helps us read and say the names of numbers.

<table>
<thead>
<tr>
<th>Figure or digit</th>
<th>Nominal word</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>One</td>
</tr>
<tr>
<td>2</td>
<td>Two</td>
</tr>
<tr>
<td>3</td>
<td>Three</td>
</tr>
<tr>
<td>423</td>
<td>Four hundred and twenty three</td>
</tr>
</tbody>
</table>

If numbers were people they could use nominal numbers to have a conversation, maybe like this...

"Hi. My name is seven. What’s yours?"
"Hi. Nice to meet you. My name is ninety four."

If you would like more information on nominal numbers, go to this webpage:

Cardinal, Ordinal, and Nominal Numbers
(http://www.factmonster.com/ipka/A0875618.html)

The first type of number we are looking at is simply called “nominal numbers”.

Nominal – is a word used to describe the name of the number. In simplest terms it is the number!

For example, the figure or digit one is spoken as one, two is spoken as two, three is spoken as three, four, two, three, is four hundred and twenty three, and so on.

If numbers were people they could use a nominal number to have a conversation, perhaps like this...

"Hi. My name is seven. What’s yours?"

"Hi. Nice to meet you. My name is ninety four."

Knowing both the face and place values of numbers helps us read and say the names of numbers, which you have learnt about in previous topics.
Cardinal Numbers

Cardinal numbers are counting numbers. They help us to describe quantity, or how many. Cardinal numbers only include whole numbers, not parts of numbers - not decimals and fractions.

One is simply one
Two is simply two
Three is simply three
Four two three is four hundred and twenty three.

This of course, can continue forever!

An example involving the use of Cardinal Numbers can be seen in the example which describes how many iPhones were lost in this statement:
“I have lost four iPhones this year!”

NOTE: Knowing both the face and place values of numbers helps us read, say and count (cardinal) numbers.

For more on Cardinal Numbers click on the link.

If you would like more information on cardinal numbers, go to this webpage:

Cardinal, Ordinal, and Nominal Numbers
(http://www.factmonster.com/ipka/A0875618.html)
Ordinal Numbers

OrdinalNumbers = ordered numbers.

What are they? An ordinal number refers to the numerical order, sequence or position of something.

It would be useful for us to understand this word better if it was spelled “Ordernal” – but it isn’t! It does mean exactly the same thing though. Order means sequence and position.

How do ordinal numbers differ from cardinal?
As you learnt last slide, cardinal numbers refer to how many of something. Ordinal refer to the position of something when it is in a sequence.

PRACTICAL EXAMPLES OF ORDINAL NUMBERS

“Robert came first (1st) in the running race.”
“I am the second (2nd) son in my family.”
“Your ticket at the concert is for the (3rd) third row and the (11th) eleventh seat.”
“The seventh (7th) Prime Minister of Australia was Billy Hughes.”

If you would like more information on ordinal numbers, go to this webpage:

Ordinal Numbers
(http://www.aaamath.com/nam15-ordinals.html)

Another type of number is the Ordinal number. It might have been more useful for us to understand this word better if it was spelled “Ordernal” – but unfortunately it isn’t!

It does mean the same thing though. The word ordinal comes from the word order – it refers to sequence and position.

Therefore, an ordinal number refers to the numerical order, sequence or position of something.

For example, we would employ ordinal numbers in the following situations. Robert came first in the running race.

I am the second (2nd) son in my family.
Your ticket at the concert is for the third row and the eleventh seat.
The seventh Prime Minister of Australia was Billy Hughes.

For more information on Ordinal Numbers, click on the link.
Cardinal and Ordinal Numbers

<table>
<thead>
<tr>
<th>Cardinal Numbers</th>
<th>Ordinal Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1st</td>
</tr>
<tr>
<td>2</td>
<td>2nd</td>
</tr>
<tr>
<td>3</td>
<td>3rd</td>
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<td>9</td>
<td>9th</td>
</tr>
<tr>
<td>10</td>
<td>10th</td>
</tr>
</tbody>
</table>

If you would like more information by video, go to this webpage:

Cardinal and Ordinal Numbers - FIRST, SECOND, THIRD, FOURTH...
(https://www.youtube.com/watch?v=e3WZ-0-CwtY)

If you would like more information, go to this webpage:

Cardinal, Ordinal and Nominal Numbers
(http://www.mathsisfun.com/numbers/cardinal-ordinal-nominal.html)

This slide shows the relationship between Cardinal and Ordinal numbers.

On the Cardinal side for the digit one, we have it as one and we can say it or write it as a word as one. In an ordinal context it would be written as first, or said as first.

Now follow the pattern for the other numbers then try the links for further information and activities.
Positive Numbers

Positive numbers are any number greater than zero (0). Therefore any number which is greater or bigger than zero is called a positive number. Positive numbers can include fractions and decimal numbers.

How do positive numbers appear on a number line?
We often use a basic number line to understand the interaction between positive numbers and negative numbers. Below is a number line that will assist you to understand positive numbers in a graphical sense.

![Number Line](http://www.mathopenref.com/positive-number.html)

Understanding number signs
Positive numbers may have a sign (+) and can be shown as such +4 or +5 etc. If there is no symbol then it is automatically a positive number e.g. 5 is the same as +5.

If you would like more information on positive numbers, go to this webpage:

Positive Numbers
(http://www.mathopenref.com/positive-number.html)

Another type of number is a positive number. Positive numbers are not just happy numbers!

Positive numbers include all that are greater than zero. Therefore, anything higher or bigger than zero is considered a positive number. Importantly, positive numbers can include fractions or decimals.

Imagine a line with numbers on it, a number line, all the numbers to the right of zero are positive numbers: one, two, three, four, and so on.

Positive numbers may be written with a plus sign before them. For example, we could write plus four, or plus five.

For more information on positive numbers, click on the link. Sometimes we need to know that a number is positive because there are negative numbers out there too! Have a look at the next slide on negative numbers.
Negative Numbers

Negative Numbers = all numbers that are less than zero (0). Another way to say this is: a negative number is any number smaller than zero (0).

Negative numbers can also include fractions and decimal numbers.

How do negative numbers appear on a number line?
Similar to the number line you saw in the last slide, below is a number line that will assist you to understand negative numbers in a graphical sense.

If you would like more information on negative numbers, go to these webpages:

- Negative Numbers
  (http://www.mathopenref.com/negative-number.html)

- Negative Numbers on the Number Line
  (https://www.khanacademy.org/math/arithmetic/absolute-value/add-sub-negatives/e/number_line_2)

Negative numbers are to the left of zero and include all numbers that are less than zero. Therefore, anything which is smaller or lower than zero is a negative number.

Take a look at the number line, to the left of zero there is negative one, negative two, negative three and so on.

We write negative numbers with the negative sign, which looks like a dash, before the number itself. So negative 5 would appear as dash, five. The dash is the symbol that indicates that the number is negative.

For more information on negative numbers, take a look at the two resource links on the bottom right.
Whole Numbers and Integers

Whole Numbers = A whole number is any complete (whole) number above zero such as 1, 2, 3, 4, 5 and so on. Whole numbers can only be positive, and they cannot be a fraction or decimal.

Integers = Complete numbers [not fraction or decimal] which can be positive, negative, or zero! This is the difference between whole numbers and integers: an integer is any complete number, whereas an whole number must be above zero.

**EXAMPLES OF INTEGERS**

-5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5

| Negative integers | Positive Integers |

If you would like more information on integers and whole numbers, go to this webpage:

🔗 Whole Numbers and Integers
(http://www.mathsisfun.com/whole-numbers.html)

Whole numbers are the natural numbers above zero. They only include positive numbers. Whole numbers must by definition, not be less than a whole.

This is why they do not include fractions or decimals. Zero is not a whole number because it cannot be counted.

Integers are almost the same. They do not include fractions and decimals but they do include all whole numbers; so, any whole number could also be called an integer, such as the integer 9 or 10, and so.

Integers, however, also include all negative numbers. For example, negative one, negative two, and so on. A further feature special to integers is that they include zero!

For more information on integers and whole numbers, click on the link.
Examples of Integers

Integers
We see and use positive and negative integers in our environment all the time. Below are some examples.

The weather report
It was minus 5 degrees today in Japan!

A bank account
I have negative $125 in my bank account!

Sales report
Today we sold 25 more than usual.

If you would like more information on integers and whole numbers, go to this webpage:

Whole Numbers and Integers
(http://www.mathsisfun.com/whole-numbers.html)

We see and use both negative and positive integers in our environment such as:

The weather report: “It was minus five degrees today in Japan.”

Or a bank balance: “I have negative $125 in my bank account!”

Or sales figures: “Today’s sales are up by 25.”
Rational Numbers

A rational number is any number that can be written as a fraction and is finite (fixed and not ongoing). Possibilities include the following:

1. Positive and negative integers. All integers can also be written as a fraction by placing the integer itself over (the number) one. 
   Examples: Positive integers written as fractions
   
   \[
   7 = \frac{7}{1} \quad 5 = \frac{5}{1} \quad 9 = \frac{9}{1}
   \]
   
   And
   
   Negative integers written as fractions
   
   \[
   -7 = \frac{-7}{1} \quad -5 = \frac{-5}{1} \quad -9 = \frac{-9}{1}
   \]

2. Fixed quantity or an exact amount, even if a fraction or decimal.
   
   \[
   \frac{1}{7} \quad \frac{3}{4} \quad \frac{6}{8}
   \]

If you would like more information on rational numbers, go to this webpage:

🔗 Introduction to Rational and Irrational Numbers

A rational number is any number that can be written as a fraction and is either finite or has a repeating pattern of numbers. Finite means that it comes to an end and does not go on forever.

Possibilities include...

Positive and negative integers. Note that all integers can also be written as a fraction by placing the integer itself over (the number) one. For example, the following positive integers are rational numbers because they can also be written as a fraction:

- Seven is equal to seven over one.
- Five is equal to five over one.
- Nine is equal to nine over one.

Possibilities also include negative integers written as fractions:

- Negative seven is equal to negative seven over one.
- Negative five is equal to negative five over one.
- Negative nine is equal to negative nine over one.

Possibilities also include fixed quantity or an exact amount, even if it’s a fraction or a decimal. For example, the following fixed quantity values are rational numbers, because they are either finite or have a repeating pattern of numbers:

- One over seven is rational because it has a repeating pattern of numbers.
- Three over four is rational because it is finite meaning it comes to an end.
- Six over eight is rational because it is finite meaning it comes to an end.
Irrational Numbers

Irrational Numbers include any number that is not Rational! Irrational numbers include numbers that are not a fixed quantity/amount and cannot be expressed exactly as a common fraction.

Irrational numbers cannot be represented as ratios or proportions (rational numbers can be) because this would be impossible.

How to identify irrational numbers? Irrational Numbers never end such as non recurring decimal numbers. For example: $\pi = 3.141592...$ (the numbers in the decimal places keep going forever, in ever increasing accuracy). Click to see how pie goes on indefinitely.

If you would like more information on rational numbers and activities, go to these webpages:

- [Introduction to Rational and Irrational Numbers](https://www.khanacademy.org/math/pre-algebra/order-of-operations/rational-irrational-numbers/v/introduction-to-rational-and-irrational-numbers)
- [Rational and Irrational Numbers](http://www.regentsprep.org/regents/math/algebra/AOP1/Lrat.htm)
- [Recognizing rational and irrational numbers (examples)](https://www.khanacademy.org/math/pre-algebra/order-of-operations/rational-irrational-numbers/v/recognizing-irrational-numbers)
- [Recognizing rational and irrational numbers (activity)](https://www.khanacademy.org/math/pre-algebra/order-of-operations/rational-irrational-numbers/e/recognizing-rational-and-irrational-numbers)
- [Classifying Numbers (activity)](https://www.khanacademy.org/quetzalcoatl/benslandiadville/cc-ben-8-numbers-operations/e/identifying-whole--integer--and-rational-numbers)

Given what we have learnt in the previous slide irrational numbers must include any number that is not rational!

They include numbers that cannot be expressed as a ratio or fraction.

Irrational numbers include numbers that have continuing digits that do not have a repeating pattern of numbers OR come to an end when made into a decimal as we saw in the last slide. Irrational numbers also include numbers that cannot be solved to an exact quantity such as the square root of any negative number (you can never get two numbers multiplied together to get a negative number), or Pi because this number keeps going on forever, without a repeating pattern of numbers.

Look closely at the “more information” links and do try the activity on recognising rational and irrational numbers.
Factors and Multiples

Factors are numbers that “go into”, or in other words “can be divided into” a number exactly. This means they have no part remaining or ‘left over’ when divided into a larger number.

If a number can go into a larger number evenly then it is a factor of the larger number.

Fifteen has many factors – that is – numbers that will go into it without remainders. One, three, and five and fifteen ALL go into 15 so one, three and five and fifteen are all factors of it.

The example on your screen shows how the number 5 is a factor of 15 by showing lots of 5 until it makes 15.

We can also test a number to see if it is a factor by dividing it into the larger number; for example, fifteen divided by 5 = 3, so we can see 15 can be divided by 5 without remainder because there is no decimal after the 3, and 5 is therefore a factor of 15.
Factors (cont’d)

Factors are numbers that “go into” (can be divided into) a number exactly. This means they have no part remaining or left over when shared into a number.

Example: The integer 5 divides exactly into the larger integer 15, so we can say that:

5 is a factor of 15.

Firstway: one way we can check this is to count up by 5. If we count by lots of 5 then we will ‘land’ on 15, exactly. (3 lots of 5 = 15)

Secondway: another way to find factors of a number is to share the larger number by lots of a smaller number (divide it). If the answer is a whole number with no left over, remainder or decimal, then you have found another factor!

For example: 15 ÷ 5 = 3 → you can see here there is no decimal left over. The answer is a whole 3.

You can also see factors nice and clearly when using a number line.

Let’s take a look at an example, what are the factors of the number six?

You can do this by asking “What numbers can go into or can divide into 6?” OR “What numbers can you multiply to get 6?”

Remember the rule? All numbers have the number 1 and the number itself as factors? So 1 and 6 are factors of 6.

Now we can figure out if there are any other factors of 6.

One way to do this is to assess if the numbers less than 6 can be divided into 6 with no remainder left over.

Can 6 be divided by 1? If we count along the number line by ones we will find that we can land directly on six. 1 is a factor.

Can 6 be divided by 2? We can count along the number line by twos and find that we land directly on 6 again. 2 is a factor.

Can 6 be divided by three? Counting along the number line by threes shows that we can also land directly on 6. 3 is a factor.

Can 6 be divided by six? Of course if we count along the number line by sixes we will land directly on 6. 6 is a factor.

What about the integer 4? If we count along our number line by fours then we will not ever land on 6. 4 is not a factor.
Factors (cont’d)

<table>
<thead>
<tr>
<th>Division method</th>
<th>Counting method</th>
<th>Factor of 12?</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 ÷ 1 = 12</td>
<td>(1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12)</td>
<td>Yes, 1 is a factor of 12</td>
</tr>
<tr>
<td>12 ÷ 2 = 6</td>
<td>(2, 4, 6, 8, 10, 12)</td>
<td>Yes, 2 is a factor of 12</td>
</tr>
<tr>
<td>12 ÷ 3 = 4</td>
<td>(3, 6, 9, 12)</td>
<td>Yes, 3 is a factor of 12</td>
</tr>
<tr>
<td>12 ÷ 4 = 3</td>
<td>(4, 8, 12)</td>
<td>Yes, 4 is a factor of 12</td>
</tr>
<tr>
<td>12 ÷ 5 = 2.4</td>
<td>(5, 10, 15)</td>
<td>No, 5 is not a factor of 12</td>
</tr>
<tr>
<td>12 ÷ 6 = 2</td>
<td>(6, 12)</td>
<td>Yes, 6 is a factor of 12</td>
</tr>
<tr>
<td>12 ÷ 7 = 1.7</td>
<td>(7, 14)</td>
<td>No, 7 is not a factor of 12</td>
</tr>
<tr>
<td>12 ÷ 8 = 1.5</td>
<td>(8, 16)</td>
<td>No, 8 is not a factor of 12</td>
</tr>
<tr>
<td>12 ÷ 9 = 1.33</td>
<td>(9, 18)</td>
<td>No, 9 is not a factor of 12</td>
</tr>
<tr>
<td>12 ÷ 10 = 1.2</td>
<td>(10, 20)</td>
<td>No, 10 is not a factor of 12</td>
</tr>
<tr>
<td>12 ÷ 11 = 1.09099</td>
<td>(11, 22)</td>
<td>No, 11 is not a factor of 12</td>
</tr>
<tr>
<td>12 ÷ 12 = 1</td>
<td>(12)</td>
<td>Yes, 12 is a factor of 12</td>
</tr>
</tbody>
</table>

So, the “factors of the number 12 are (1, 2, 3, 4, 6, and 12).” The number one will always be a factor of ALL whole numbers. The number itself (in this case 12) will always go into itself so will always be a factor. Therefore any number will always have at least one and the number itself as factors!

Go to this webpage to try an activity relating to factors:

**Factor Pairs**
(https://www.khanacademy.org/math/pre-algebra/factors-multiples/divisibility_and_factors/e/factor-pairs)

Using your knowledge of factors from the previous two slides, let’s find the factors of the number 12.

Investigate all the numbers between and including 1 and 12. Now ask, “Which numbers will “go into” or can be divided into 12 exactly, without any remainder?”

One way to do this is, is you can count up in groups by each number from one to twelve. For example, counting by twos: 2, 4, 6, 8, 10, 12. Then by threes: 3, 6, 9, 12, and so on. If you land on twelve, then that number is a factor of twelve.

Alternatively you can divide 12 by all the numbers from 1 to 12. For example, 12 divided by 6, would give us 2, which is a factor as it is a number without any remainder. For the more difficult divisions such as twelve divided by seven, you could use a calculator to help you.
**Multiples**

A multiple is the number any factor will “go into”.

**Example:**
The factors of 15 are 1, 3, 5, and 15. Therefore we can say that: 15 is a multiple of 1, 3, 5, and 15.

Q. Is 28 a multiple of 7?
When we multiply a factor of any number by another factor of the same number and we get a multiple. i.e. factor x factor = multiple.

Example: e.g. 7 and 4 are factors of 28. So, factor x factor: 7 x 4 = 28 (the multiple).

Yes, 28 is a multiple of 7

Q. Is 28 a multiple of 4?
Yes, 28 is a multiple of 4

Q. What are the multiples of 7?
The multiples of 7 are 7, 14, 21, 28, 35...

If you would like more information on factors and multiples, go to this webpage:

Finding Factors of a Number
(https://www.khanacademy.org/math/pre-algebra/factors-multiples/divisibility_and_factors/v/finding-factors-of-a-number)

Go to this webpage to try an activity relating to factors and multiples:

Identifying Factors and Multiples
(https://www.khanacademy.org/math/pre-algebra/factors-multiples/divisibility_and_factors/e/identifying-factors-and-multiples)

We now know that factors are the integers that when duplicated will go into a larger number.

The larger number we call the **multiple**.

In the example on your screen, 15 is the multiple of 1, 3, 5 and even itself.

One way we can find a multiple of other numbers is to multiply factors together. If we know that 7 and 4 are factors of 28, then 28 must be a multiple of 7.

In the second question we know that multiplying one factor (4) by another factor (7) is equal to 28. So we can say that 28 is, indeed, a multiple of 4.

In the third question, if we are to find the multiples of 7, we will find that they are seven, fourteen, twenty one, twenty eight, thirty five and so on.

As you may have realised, the number of multiples of 7 can continue forever. Indeed, the multiples of any number go to infinity, which means they have no end.
Prime Numbers

A prime number has only two factors, the number one (1) and the number itself...and no more.

Examples:
1. The integer 7 is a prime number as it only has the two factors, 1 and 7. 7 is therefore a prime number
2. The only factors of 5 are 1 and 5, is 5 a prime number?
3. The only factors of 11 are 1 and 11, is 11 a prime number?

If you would like more information on prime numbers, go to this webpage:

Prime Numbers
(https://www.khanacademy.org/math/pre-algebra/factors-multiples/prime_numbers/v/prime-numbers)

Go to this webpage to try an activity relating to prime numbers:

Prime Numbers (activity)
(https://www.khanacademy.org/math/pre-algebra/factors-multiples/prime_numbers/e/prime_numbers)

In a previous slide we learned that all whole numbers will have at least two factors. They will always have the number one and the number itself as factors.

Some integers will have more factors than this and some will not. If a number is only divisible by one and itself, then we call this type of number a prime number.

If we look at the number seven, we can see it has only the two factors, 1 and 7. Seven cannot be divided by any other number exactly. So we can say that 7 is a prime number.

Likewise, if the only factors of 5 are 1 and 5, then 5 is also a prime number.

Have a think about whether or not 11 is a prime number.
If you would like more information on composite numbers, go to this webpage:

🔗 Recognising Prime and Composite Numbers
(https://www.khanacademy.org/math/pre-algebra/factors-multiples/prime_numbers/v/recognizing-prime-numbers)

Go to this webpage to try an activity relating to composite numbers:

🔗 Composite Numbers (activity)
(https://www.khanacademy.org/math/pre-algebra/factors-multiples/prime_numbers/e/composite_numbers)

Many numbers will have more than two factors.
Prime numbers only have two factors, however Composite numbers have more.
The example on your screen shows the integer nine. Nine has three factors. Can you work out what they are? Yes, nine has the factors one, three and nine so it is a composite number.

Try the next example (twelve) by yourself. Is 12 a prime or a composite number? How can you prove that it is prime or composite? Hopefully you found the factors 1, 12, 3, 4 and 6, and this is proof that 12 is in fact a composite number since it has more than two factors.
Square Numbers

Square numbers if represented as objects e.g. dots on a page, can be placed into a square shape, with equal sides and equal number of rows and columns.

When we multiply a number by itself, we get a square number!

An example of a square number is the integer nine. You can see that it is possible to place nine into a square shape like this.

There are many square numbers, try to think of some. Here are some square numbers to get you started.

In the next slide we will take a further look at square number examples.
Square Numbers (cont’d)

Multiply a number by itself to get a square number.

a) \(2 \times 2 = 4\)
b) \(3 \times 3 = 9\)
c) \(4 \times 4 = 16\)

\(10 \times 10 = 100\)

Activity: What are the square numbers up to 100?

Answers: 4, 9, 16, 25, 36, 49, 64, 81, 100

Let’s take a closer look at some square numbers.

Four is a square number because we can fit four dots into equal rows and columns like this with two rows and two columns.

Nine is a square number because we can use a box with three rows and three columns, like this.

Sixteen is of course a square number because we can use a box with four rows and four columns, like this.

One hundred is a square number as it forms a square box with ten rows and ten columns.

By now you might have noticed the trend by which we established that these numbers are square numbers. Two times two, three times three, four times four.

Go ahead and think about all the square numbers up until one hundred. Since we were only counting square numbers up until one hundred, ten times ten would be our final square number. The other square numbers can be seen on your screen.
Triangular Numbers

Given what we just learnt about square numbers, you might be able to predict what a triangular number is.

A **triangular number** can be represented in the shape of a triangle.

Question one asks us if it’s possible to fit three dots inside a triangle equally. You can see that this is possible by arraying them in this shape.

Question two asks us if it’s possible to fit 6 dots into a triangle. Have a think about how this might work, remembering that you can use more than two rows like we did in the last example. You can see that 6 dots can fit into a triangle with this configuration and, therefore, 6 is, indeed, a triangular number.

In the next slide we will look at a pattern for determining triangular numbers.
Triangular Numbers (cont’d)

If we were to explore triangular numbers a little further we would find a pattern.

Go ahead and count the number of dots on each row and see if you can find a pattern. Each row is defined as the highlighted section that you see here. Once you have counted the number of dots on each row, see if you can predict the next triangular number.

Hopefully, you realised that triangular numbers can be found by simply adding the number of dots in your row to the previous triangular number!
Conclusion

**CONGRATULATIONS ON COMPLETING TOPIC 1.3**

In 1.3 we looked at:

- Nominal/Cardinal/Ordinal numbers;
- Positive/Negative numbers;
- Integers/Whole numbers;
- Rational/Irrational;
- Prime/Composite;
- Factors/Multiples;
- Square numbers/Triangular numbers

If you are still unsure about any of the concepts and types of numbers presented to you in this series, revisit the slides, follow the “more information” links and try the activities.

Congratulations, you have complete this topic on types of numbers.

You should now have a better understanding on the various types of numbers that you will come across.