Lesson 3 – Position on Number Lines and Scales

Starter

1) How many hundredths is 0.67?
2) Write down a decimal number that has a 5 as the ten-thousandths digit
3) Write down a number that has forty two thousandths
4) What is the value of the 5 in the number 56,890,004,036?

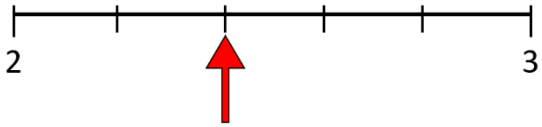
Starter Answers

1) 67 2) 0.0005 3) 0.042 4) Fifty billion

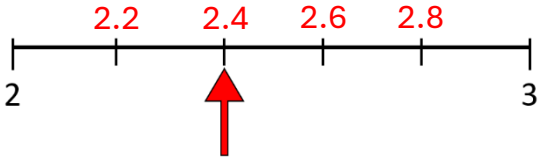
In this lesson, we will look at how to place numbers onto **number lines** with different **scales**.

Example 1

What number is the arrow pointing to?



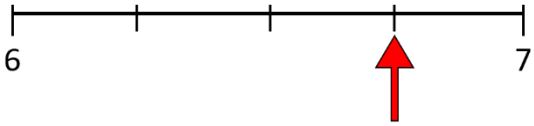
There is a distance of 1 between 2 and 3
This distance is split into 5 equal sections.
To find out how much each section is worth, we do: $1 \div 5 = 0.2$
So, we are counting up 0.2 each time.



So, the arrow is pointing to the number 2.4.

Example 2

What number is the arrow pointing to?



The distance between 6 and 7 is 1
This time, it is split into 4 equal sections, so $1 \div 4 = 0.25$
So, we are counting up 0.25 each time.

So the arrow is pointing to the number 6.75.

Example 3

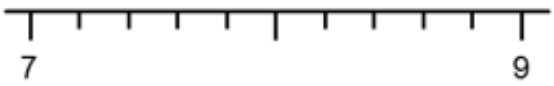
What number is the arrow pointing to?

First find the distance between 3.14 and 3.15: 3.15 – 3.14 = 0.01
There are 10 equal gaps so: 0.01 ÷ 10 = 0.001
We are counting up 0.001 each time
3.14 + 0.001 = 3.141
3.141 + 0.001 = 3.142

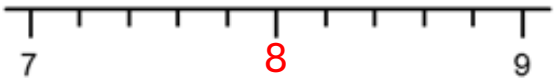
The arrow is pointing to 3.142.

Example 4

Place the number 8.2 onto this number line.



Half way between 7 and 9 is the number 8. Put this in the middle.



There are 5 equal gaps between 8 and 9.
1 ÷ 5 = 0.2
We are counting up 0.2 each time.