

Now we know that decimal fractions are equal parts of a whole (tenths, ten (10) equal parts; hundredths, one hundred (100) equal parts; thousandths, one thousand (1000) equal parts), we are going to spend today's session **ROUNDING** decimal numbers to either the nearest whole or the nearest tenth.

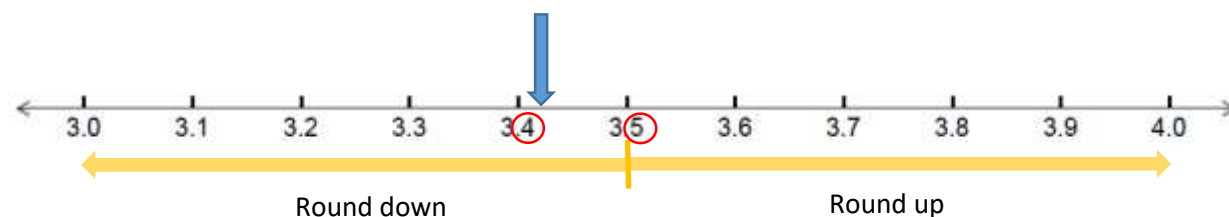
In order to successfully achieve this, we need to remember our *rules for rounding*...

Here's a decimal number; 3.42 (three point four two; three ones, four tenths and two hundredths; three and forty-two hundredths; $3 + \frac{4}{10} + \frac{2}{100}$; $3\frac{42}{100}$).

ones	decimal point	tenths	hundredths
3	•	4	2

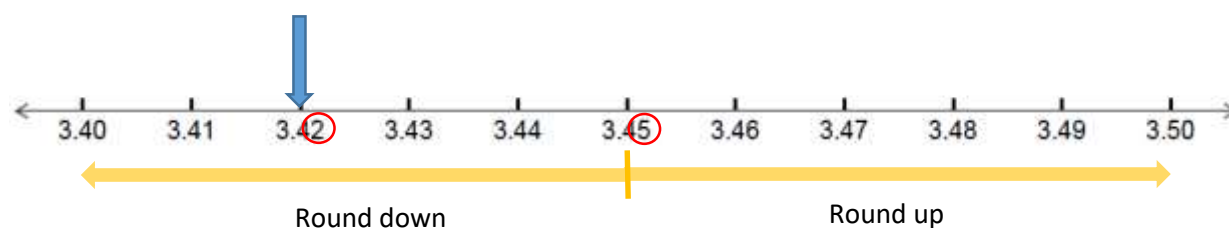
To round 3.42 to the nearest **whole** number, I am going to look at the next digit to the right of the **whole** number, in this case it is the 4 in the **tenths** column.

Our rules for rounding tell us that if the digit to the right is less than five, then we 'round down' to the whole number (3). It might help to look at this on a number line, the blue arrow shows the **approximate** position of 3.42 on the line;



We can see that the 4 tenths of 3.42 are less than the 5 tenths of 3.5, so we round down to the 3 whole ones. So, 3.42 rounded to the nearest whole number is **3**.

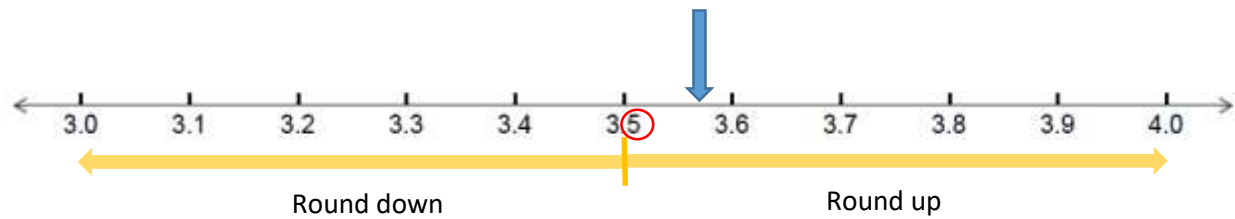
What about to the nearest tenth? The same idea applies – look at the digit to the right of the tenths digit, in this case **2 hundredths**. Let's use a number line again to show this;



We can see that the 2 hundredths of 3.42 are less than the 5 hundredths of 3.45, so we round down to the 4 tenths. So, 3.42 rounded to the nearest tenth is **3.4**

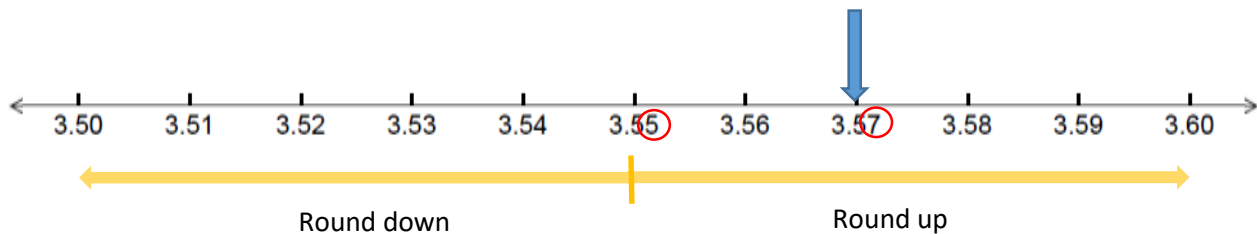
"But what about rounding up?" I hear you ask...well, that's a reasonable question; read on over the page and find out!

Here's another number **3.57** (three point five seven; three ones, five tenths and seven hundredths; three and fifty-seven hundredths; $3 + \frac{5}{10} + \frac{7}{100}$; $3\frac{57}{100}$). And here's a number line to go with it;



To round to the nearest whole number, I am again going to look at the value of the tenths digit (the digit to the right of the ones). The tenths digit is a five. Our rules for rounding say that if the digit is a 5 or higher, we round up, in this case to the next whole one, which is 4. So, 3.57 rounded to the nearest whole is **4**.

Okay, rounding to the nearest tenth...here's another line...



We can see that the 7 hundredths of 3.57 are more than the 5 hundredths of 3.55, so we round up to the 6 tenths. So, 3.57 rounded to the nearest tenth is **3.6**

So now it's your turn to round a range of two and three digit decimal numbers!