

### Maths- 18.5.20

Here are your maths tasks for this week- please use the book provided to complete the tasks ☺ We normally do maths Monday-Thursday, with Friday being our day for Mathletics and Times table rockstars to consolidate other areas of learning. Please see the Times table sheet for suggested activities. I've attached an arithmetic paper for Friday to complete this week too ☺

#### Monday

This week, we will be focusing on decimals, dividing number by 10 and 100, comparing and ordering decimals to 2 decimal places. Today, we will be having a look at dividing numbers by 10 and 100. When we multiply a number, we are actually making the number bigger, so it moves along our place value chart to the left. If we are multiplying by 10, because there is one '0' in ten, we are moving all numbers '1' to the left to increase its size. If we are multiplying a number by 100, because there is two '0's in one hundred, we are moving all of the numbers '2' to the left to increase its size. See the examples below:

$$0.12 \times 10 = 1.2 \text{ (or } 01.2 \text{ which is the same!)}$$

$$0.12 \times 100 = 12.0 \text{ (move all numbers 2 across)}$$

Thousands	Hundreds	Tens	Ones	Tenths	Hundredths
		0	1	2	

← X10
← X10
← x10

We have to add a '0' as a place holder, to show that there is no number in that column, so for example, there are no ones in 0.12. We couldn't just write .12 as this isn't mathematically correct.

This is exactly the same method when we are dividing numbers by 10 or 100. If we divide by 10, we are actually making the number smaller, so we would move the numbers 1 to the right (because there is one '0' in 10). If we divide by 100, we are making the number smaller again, but because there are two '0's in 100, we move the numbers two to the right. See the example below:

Thousands	Hundreds	Tens	Ones	Tenths	Hundredths
		1	2		
			1	2	

→
→

$$12 \text{ divided by } 10 = 1.2$$

$$12 \text{ divided by } 100 = 0.12$$

#### Task:

See if you can complete the sums below using the place value charts. Remember, tenths are bigger than hundredths and hundredths are smaller than tenths.

Complete the divisions.

a)  $37 \div 10 = \square$

e)  $80 \div 10 = \square$

b)  $11 \div 10 = \square$

f)  $\square = 29 \div 10$

c)  $48 \div 10 = \square$

g)  $\square \div 10 = 6.3$

d)  $99 \div 10 = \square$

h)  $3.9 = \square \div 10$

Complete the calculations.

a)  $3 \div 100 = \square$

d)  $\square = 60 \div 100$

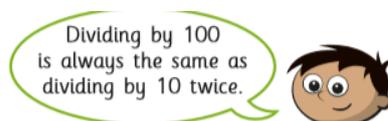
b)  $90 \div 100 = \square$

e)  $\square \div 100 = 0.5$

c)  $\square = 5 \div 100$

f)  $0.02 = \square \div 100$

#### Challenge:

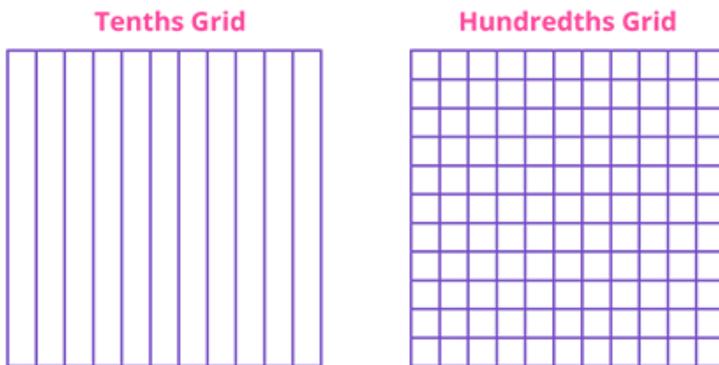


Do you agree with Amir? \_\_\_\_\_

Explain your answer.

**Tuesday**

Today, we will be comparing numbers with decimals. As we discussed earlier, tenths are bigger than hundredths and hundredths are smaller than tenths. We can see this below:



Here, the tenths 'parts' are much bigger than the hundreds 'parts' and this can also be seen in decimals as tenths are represented as below:

$\underline{3}$  is the same as **0.3 (or 0.30)**

10

Whereas hundreds are represented as below:

3 is the same as **0.03**

100

So, we know that 0.3 is bigger than 0.03. This applies to all decimals. So, for example if I had these few numbers below:

1.34                  1.3                  1.03

Discuss with your parents- **which is the smallest? Which is the biggest? How do you know? We need to make sure that we are making all numbers into hundredths to make the comparison. Remember 1.3 is the same as 1.30.**

**Task:**

See if you can complete these few questions below:

<p>a) <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"><tr><td style="width: 20px; height: 20px; background-color: #f8d7da;">0</td><td style="width: 20px; height: 20px; background-color: #fff3cd;">Tths</td><td style="width: 20px; height: 20px; background-color: #d4edda;">Hths</td></tr><tr><td>7</td><td>6</td><td>8</td></tr></table> ○ <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"><tr><td style="width: 20px; height: 20px; background-color: #f8d7da;">0</td><td style="width: 20px; height: 20px; background-color: #fff3cd;">Tths</td><td style="width: 20px; height: 20px; background-color: #d4edda;">Hths</td></tr><tr><td>7</td><td>0</td><td>2</td></tr></table></p>	0	Tths	Hths	7	6	8	0	Tths	Hths	7	0	2	<p>a) <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"><tr><td style="width: 20px; height: 20px; background-color: #f8d7da;">0</td><td style="width: 20px; height: 20px; background-color: #fff3cd;">Tths</td><td style="width: 20px; height: 20px; background-color: #d4edda;">Hths</td></tr><tr><td>6</td><td>2</td><td>8</td></tr></table> &lt; <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"><tr><td style="width: 20px; height: 20px; background-color: #f8d7da;">0</td><td style="width: 20px; height: 20px; background-color: #fff3cd;">Tths</td><td style="width: 20px; height: 20px; background-color: #d4edda;">Hths</td></tr><tr><td> </td><td> </td><td> </td></tr></table></p>	0	Tths	Hths	6	2	8	0	Tths	Hths			
0	Tths	Hths																							
7	6	8																							
0	Tths	Hths																							
7	0	2																							
0	Tths	Hths																							
6	2	8																							
0	Tths	Hths																							
<p>b) <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"><tr><td style="width: 20px; height: 20px; background-color: #f8d7da;">0</td><td style="width: 20px; height: 20px; background-color: #fff3cd;">Tths</td><td style="width: 20px; height: 20px; background-color: #d4edda;">Hths</td></tr><tr><td>3</td><td>2</td><td>5</td></tr></table> ○ <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"><tr><td style="width: 20px; height: 20px; background-color: #f8d7da;">0</td><td style="width: 20px; height: 20px; background-color: #fff3cd;">Tths</td><td style="width: 20px; height: 20px; background-color: #d4edda;">Hths</td></tr><tr><td>3</td><td>9</td><td>6</td></tr></table></p>	0	Tths	Hths	3	2	5	0	Tths	Hths	3	9	6	<p>b) <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"><tr><td style="width: 20px; height: 20px; background-color: #f8d7da;">0</td><td style="width: 20px; height: 20px; background-color: #fff3cd;">Tths</td><td style="width: 20px; height: 20px; background-color: #d4edda;">Hths</td></tr><tr><td>3</td><td>2</td><td>6</td></tr></table> &gt; <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"><tr><td style="width: 20px; height: 20px; background-color: #f8d7da;">0</td><td style="width: 20px; height: 20px; background-color: #fff3cd;">Tths</td><td style="width: 20px; height: 20px; background-color: #d4edda;">Hths</td></tr><tr><td>3</td><td> </td><td> </td></tr></table></p>	0	Tths	Hths	3	2	6	0	Tths	Hths	3		
0	Tths	Hths																							
3	2	5																							
0	Tths	Hths																							
3	9	6																							
0	Tths	Hths																							
3	2	6																							
0	Tths	Hths																							
3																									
<p>c) <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"><tr><td style="width: 20px; height: 20px; background-color: #f8d7da;">0</td><td style="width: 20px; height: 20px; background-color: #fff3cd;">Tths</td><td style="width: 20px; height: 20px; background-color: #d4edda;">Hths</td></tr><tr><td>0</td><td>4</td><td>1</td></tr></table> ○ <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"><tr><td style="width: 20px; height: 20px; background-color: #f8d7da;">0</td><td style="width: 20px; height: 20px; background-color: #fff3cd;">Tths</td><td style="width: 20px; height: 20px; background-color: #d4edda;">Hths</td></tr><tr><td>0</td><td>2</td><td>9</td></tr></table></p>	0	Tths	Hths	0	4	1	0	Tths	Hths	0	2	9	<p>c) <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"><tr><td style="width: 20px; height: 20px; background-color: #f8d7da;">0</td><td style="width: 20px; height: 20px; background-color: #fff3cd;">Tths</td><td style="width: 20px; height: 20px; background-color: #d4edda;">Hths</td></tr><tr><td>9</td><td>9</td><td>8</td></tr></table> &lt; <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"><tr><td style="width: 20px; height: 20px; background-color: #f8d7da;">0</td><td style="width: 20px; height: 20px; background-color: #fff3cd;">Tths</td><td style="width: 20px; height: 20px; background-color: #d4edda;">Hths</td></tr><tr><td> </td><td> </td><td> </td></tr></table></p>	0	Tths	Hths	9	9	8	0	Tths	Hths			
0	Tths	Hths																							
0	4	1																							
0	Tths	Hths																							
0	2	9																							
0	Tths	Hths																							
9	9	8																							
0	Tths	Hths																							
<p>d) <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"><tr><td style="width: 20px; height: 20px; background-color: #f8d7da;">0</td><td style="width: 20px; height: 20px; background-color: #fff3cd;">Tths</td><td style="width: 20px; height: 20px; background-color: #d4edda;">Hths</td></tr><tr><td>1</td><td>0</td><td>3</td></tr></table> ○ <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"><tr><td style="width: 20px; height: 20px; background-color: #f8d7da;">0</td><td style="width: 20px; height: 20px; background-color: #fff3cd;">Tths</td><td style="width: 20px; height: 20px; background-color: #d4edda;">Hths</td></tr><tr><td>1</td><td>2</td><td>0</td></tr></table></p>	0	Tths	Hths	1	0	3	0	Tths	Hths	1	2	0	<p>d) <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"><tr><td style="width: 20px; height: 20px; background-color: #f8d7da;">0</td><td style="width: 20px; height: 20px; background-color: #fff3cd;">Tths</td><td style="width: 20px; height: 20px; background-color: #d4edda;">Hths</td></tr><tr><td>1</td><td>4</td><td>6</td></tr></table> &gt; <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"><tr><td style="width: 20px; height: 20px; background-color: #f8d7da;">0</td><td style="width: 20px; height: 20px; background-color: #fff3cd;">Tths</td><td style="width: 20px; height: 20px; background-color: #d4edda;">Hths</td></tr><tr><td> </td><td>8</td><td> </td></tr></table></p>	0	Tths	Hths	1	4	6	0	Tths	Hths		8	
0	Tths	Hths																							
1	0	3																							
0	Tths	Hths																							
1	2	0																							
0	Tths	Hths																							
1	4	6																							
0	Tths	Hths																							
	8																								
<p>e) <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"><tr><td style="width: 20px; height: 20px; background-color: #f8d7da;">0</td><td style="width: 20px; height: 20px; background-color: #fff3cd;">Tths</td><td style="width: 20px; height: 20px; background-color: #d4edda;">Hths</td></tr><tr><td>2</td><td>7</td><td>2</td></tr></table> ○ <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"><tr><td style="width: 20px; height: 20px; background-color: #f8d7da;">0</td><td style="width: 20px; height: 20px; background-color: #fff3cd;">Tths</td><td style="width: 20px; height: 20px; background-color: #d4edda;">Hths</td></tr><tr><td>2</td><td>7</td><td>1</td></tr></table></p>	0	Tths	Hths	2	7	2	0	Tths	Hths	2	7	1													
0	Tths	Hths																							
2	7	2																							
0	Tths	Hths																							
2	7	1																							

Here are four digit cards.

**Challenge:**



Use each digit card once to make this statement correct.

$$\square . \square > \square . \square$$

How many possible answers are there?

## Wednesday

Now that we know a bit more about decimals and how we can tell which numbers are smaller/bigger, today we are going to order some decimals!

When we think about ordering decimals, we first need to look at the ones (the number before the decimal). If this number is the same for all of the decimals (as it is below), we then need to look at the tenths to help us with our ordering. We need to look for the smallest tenths number first (the first number after the decimal) as this is then the smallest number, so in our case the smallest is 1.23. Again, we would look down the other 2 decimals and look at their tenths for the next smallest number, which in our case is 1.34. We would then know that 1.45 is the largest number because this has the biggest number of tenths.

1.23	1.45	1.34
1.23	1.34	1.45

Remember- you may be asked to work in ascending or descending order. Have a look at the definitions below to help you:

**Ascending- going from the smallest to the biggest number**

**Descending- going from the biggest to the smallest number**

Here is a video to explain this method further:

<https://www.youtube.com/watch?v=2J-qikp7vTs>

Task:

See if you can answer these questions below. Use the method above to help you.

3 Write the numbers in descending order.

1.42	4.12	1.24	2.41
------	------	------	------

\_\_\_\_\_

7 Write the numbers in ascending order.

a) 2.38 0.97 1.45 1.81

\_\_\_\_\_

b) 0.64 0.7 0.09 0.46

\_\_\_\_\_

c) 12.3 2 7.83 0.99

\_\_\_\_\_

4 Teddy's teacher asks him to put some numbers in ascending order.

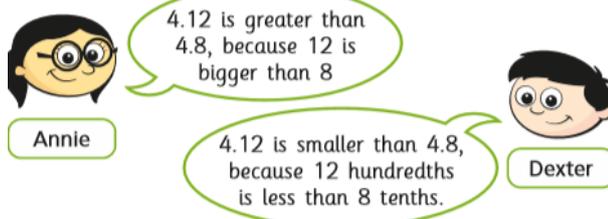
Here is his answer.

0.64	12.7	2.83
------	------	------

Do you agree with Teddy? \_\_\_\_\_

Talk about it with a partner.

Challenge: Annie and Dexter are comparing the decimals 4.12 and 4.8



Who do you agree with? \_\_\_\_\_

Explain your answer.

## Thursday

Today, we will be looking at rounding some decimals to the nearest whole number. This means, when we have rounded the number, we don't want any decimals! Remember, when we round we sing a song to ourselves which is below:

**1, 2, 3 and 4, we don't change these any more.**

**5, 6, 7, 8 and 9, we round these up, all the time.**

This song is exactly the same for decimals too! Let's have a look at the decimal below on our place value chart:

Thousands	Hundreds	Tens	Ones	Tenths	Hundredths
		3	4	1	
		5	7	6	

The first thing we need to do, is look at the tenths and sing our song. Hopefully, we know that '1' means we don't change this anymore. So, we then look at the ones and we keep the number as 34. So 34.1 rounded to the nearest whole number is 34.

If we have a look at our second number 57.6, we would look at the tenths and sing our song. Hopefully, we know that '6' means we round these up. Now, we need to look at the ones. 7 rounded up is 8, so 57.6 rounded to the nearest whole number is 58. *The only time the tens change, is when the number has a '9' in the ones column and has to be rounded up.*

### Task:

See if you can answer some of the questions below:

#### 7 Which numbers round up to the nearest whole number?

Circle your answers.

4.1    2.8    0.7    12.3    0.5    99.3

#### 8 Round each decimal to the nearest whole number.

- |        |                      |         |                      |
|--------|----------------------|---------|----------------------|
| a) 1.8 | <input type="text"/> | e) 13.7 | <input type="text"/> |
| b) 4.2 | <input type="text"/> | f) 20.1 | <input type="text"/> |
| c) 0.9 | <input type="text"/> | g) 0.4  | <input type="text"/> |
| d) 1.5 | <input type="text"/> | h) 99.8 | <input type="text"/> |

### Challenge:

Ron is rounding 8.2 to the nearest whole number.



Because 2 tenths is less than 5 tenths, the number rounds down to 7

Do you agree with Ron? \_\_\_\_\_

Explain your answer.

## Friday

TT rockstars/Mathletics/Arithmetic test ☺ If you have completed all of the Mathletics activities which I have assigned, please choose on the homepage an activity which relates to the maths you have been doing this week.

### Help for this week

#### Decimals

A way that I help children to see the changes in numbers when they divide or multiply by 10/100 is by using a place value chart:

Thousands	Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths

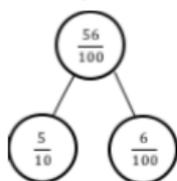
All numbers have decimal Dave after them, we just don't draw it with whole numbers. When we have decimal numbers, they are smaller than normal numbers, so we call them tenths. Hundredths are even smaller than tenths. Say we had 54. The 50 is a tens number and the 4 is ones (so we would put those numbers under the right column). If we divide a number, we make it smaller, so if we divide by 10, we move both numbers one place to their right. If we divide by 100, we move both numbers 2 spaces to the right. It's important that the children understand that because 100 has 2 '0's, this means

there should be 2 numbers AFTER the decimal. If the number is divided by 10, because there is only one '0', there should only be one number AFTER the decimal. We always have to have a number in the ones, even if this is a '0' as a place holder.

#### Comparing/Ordering/rounding decimals

To be able to do all of the above, the children must first have an understanding of the value of decimals. A good way to do this is to partition the numbers using their understanding of tenths and hundredths from last week. We know tenths must have one number after the decimal because  $1/10$  has one zero. We also know that hundredths must have two numbers after the decimal because  $1/100$  has two zeros.

We can partition 56 hundredths into tenths and hundredths.



Partition:

- 65 hundredths
- 31 hundredths
- 82 hundredths

Using these circles, we can see that  $56/100$  is  $5/10$  and  $6/100$ . The children could then write these as decimals using the information above. So, they should now have  $56/100 = 0.5$  tenths and  $0.06$  hundredths. This will need to be repeated a few times so that they are secure with what the decimals are made out of, before they can then apply this to comparing/order.

#### Ordering decimals/comparing/rounding decimals games

Ordering and comparing decimals could be made really fun! Here are some suggestions below:

- Get some teddies out and draw some decimals onto paper and place them on the teddies. **Can you swap the teddies round so they are in ascending order? Descending order?**
- Play a game of higher/lower. Make a set of decimals cards- they could be any numbers with one decimal place. Put them upside down and divide them out between you and your parent/carer(s). Now, take it in turns to say 'bigger' or 'smaller'. If you get it right, take all of the cards from the pile and start again, laying one card down at a time. The winner is the person with all of the cards left at the end.
- If you have a dice at home, you could make your own game mat with some decimals that need to be rounded. Everyone starts at 'start' (you can use a counter or a piece of paper or a household object to go around the board with). Roll the dice and move the spaces- but whatever you land on, you need to round correctly. If you round incorrectly, you go back to the beginning! I have attached a blank game mat to resources in home learning.

If you need any extra support, please email me on [michaelsyddallyear4@gmail.com](mailto:michaelsyddallyear4@gmail.com) and I will help ☺