

Rounding

Success Steps

- * Look at the digit to the right of the value you are rounding to.
- * 1, 2, 3 and 4 are rounded down - the value stays the same
- * 5, 6, 7, 8 and 9 are rounded up - add 1 onto the value
- * Remember the digits after the one you've rounded should be zeroes.

Read the success steps above and watch the rounding rap on YouTube(link below) before completing work.

https://www.youtube.com/watch?v=rIJgBO7_GgA

Activities.

- Rounding to the nearest 10
- Rounding to the nearest 10, 1000, 10000
- Rounding to the nearest 10000
- Counting in powers of 10
- Times tables.

<https://www.timestables.co.uk/>

<https://www.topmarks.co.uk/maths-games/hit-the-button>

Round to the Nearest 10

Notes and Guidance

Children start to look at the position of a 2-digit number on a number line. They then apply their understanding to 3-digit numbers, focusing on the number of ones and rounding up or not.

Children must understand the importance of 5 and the idea that although it is in the middle of 0 and 10, that by convention any number ending in 5 is always rounded up, to the nearest 10

Mathematical Talk

What is a multiple of 10?

Which multiples of 10 does ____ sit between?

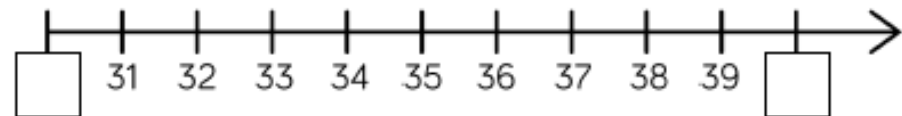
Which column do we look at when rounding to the nearest 10?
What do we do if the number in that column is a 5?

Which number is being represented? Will we round it up or not?
Why?

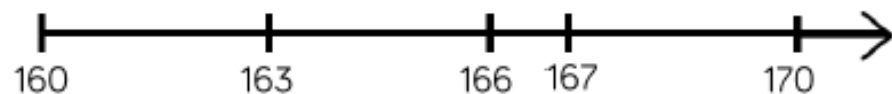
Varied Fluency

R

- Which multiples of 10 do the numbers sit between?



- Say whether each number on the number line is closer to 160 or 170?



Round 163, 166 and 167 to the nearest 10

- Complete the table:

Start number	Rounded to the nearest 10
851	
XCVIII	

Problem solving and reasoning questions

A whole number is rounded to 370
What could the number be?
Write down all the possible answers.

370

Whitney says:



847 to the nearest 10
is 840

Do you agree with Whitney?

Explain why.

Two different two-digit numbers both
round to 40 when rounded to the
nearest 10

The sum of the two numbers is 79

What could the two numbers be?

Is there more than one possibility?

Round to 10, 100 and 1,000

Notes and Guidance

Children build on their knowledge of rounding to 10, 100 and 1,000 from Year 4. They need to experience rounding up to and within 10,000

Children must understand that the column from the question and the column to the right of it are used e.g. when rounding 1,450 to the nearest hundred – look at the hundreds and tens columns. Number lines are a useful support.

Mathematical Talk

Which place value column do we need to look at when we round to the nearest 1,000?

When is it best to round to the nearest 10? 100? 1,000?

Can you give an example of this?



Can you justify your reasoning?

Is there more than one solution?

Will the answers to the nearest 100 and 1,000 be the same or different for the different start numbers?

Varied Fluency

Complete the table.

Start Number	Rounded to the nearest 10	Rounded to the nearest 100	Rounded to the nearest 1,000
			
			
DCCLXIX			

For each number, find five numbers that round to it when rounding to the nearest 100

300

10,000

8,900

Complete the table.

Start Number	Nearest 10	Nearest 100	Nearest 1,000
365			
1,242			
	4,770		

Rounding to 10, 100 and 1,000

Reasoning and Problem Solving

My number rounded to the nearest 10 is 1,150
Rounded to the nearest 100 it is 1,200
Rounded to the nearest 1,000 it is 1,000



Jack

What could Jack's number be?

Can you find all of the possibilities?

2,567 to the nearest 100 is 2,500



Whitney

Do you agree with Whitney?
Explain why.

Teddy



4,725 to the nearest 1,000 is 5,025

Explain the mistake Teddy has made.

Round within 100,000

Notes and Guidance

Children continue to work on rounding, now using numbers up to 100,000

Children use their knowledge of multiples of 10, 100, 1,000 and 10,000 to work out which two numbers the number they are rounding sits between. A number line is a good way to visualise which multiple is the nearest. Children may need reminding of the convention of rounding up if numbers are exactly halfway.

Mathematical Talk

Which place value column do we need to look at when we round to the nearest 1,000?

Why would we round these distances to the nearest 1,000 miles?

When is it best to round to 10? 100? 1,000?

Can you give an example of this?

Can you justify your reasoning?

Varied Fluency

Round 85,617

- To the nearest 10
- To the nearest 100
- To the nearest 1,000
- To the nearest 10,000

Round the distances to the nearest 1,000 miles.

Destination	Miles from Manchester airport	Miles to the nearest 1,000
New York	3,334	
Sydney	10,562	
Hong Kong	5,979	
New Zealand	11,550	

Complete the table.

Rounded to the nearest 100	Start Number	Rounded to the nearest 1,000
	15,999	
	28,632	
	55,555	

Round within 100,000

Reasoning and Problem Solving

Round 59,996 to the nearest 1,000

Round 59,996 to the nearest 10,000

What do you notice about the answers?

Can you think of three more numbers where the same thing could happen?

Two 5-digit numbers have a difference of five.

When they are both rounded to the nearest thousand, the difference is 1,000

What could the numbers be?

Counting in Powers of 10

Notes and Guidance

Children complete number sequences and can describe the term-to-term rule e.g. add ten each time. It is important to include sequences that go down as well as those that go up.

They count forwards and backwards in powers of ten up to 1,000,000

Mathematical Talk

Will there be any negative numbers in this sequence?

What pattern do you begin to see with the positive and negative numbers in the sequence?

What patterns do you notice when you compare sequences increasing or decreasing in 10s, 100s, 1,000s etc.?

Can you create a rule for the sequence?

Varied Fluency

Complete the sequence.

____, _____, 2, _____, 22, _____, 42, _____, _____, 72

The rule for the sequence is _____.

Circle and correct the mistake in each sequence.

- 7,875, 8,875, 9,875, 11,875, 12,875, 13,875, ...
- 864,664, 764,664, 664,664, 554,664, 444,664, ...

Here is a Gattegno chart showing 32,450

									Cards	
1	2	3	4	5	6	7	8	9	+10	-10
10	20	30	40	50	60	70	80	90	+100	-100
100	200	300	400	500	600	700	800	900	+1,000	-1,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	+10,000	-10,000
10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000		

Give children a target number to make then let them choose a card. Children then need to adjust their number on the chart.

Counting in Powers of 10

Reasoning and Problem Solving

Amir writes the first five numbers of a sequence.

They are

3,666, 4,666, 5,666, 6,666, 7,666

The 10th term will be 15,322 because I will double the 5th term.

Amir



Is he correct?
Explain why.

I am counting up in 10s from 184
I will include 224



Mo

I am counting up in 100s from 604
I will include 1,040



Rosie

I am counting up in 1,000s from 13
I will include 130,000



Jack

Who has made a mistake?
Identify anyone who has made a mistake and explain how you know.