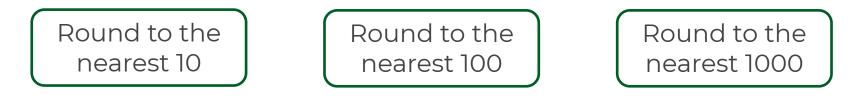
Mathematics

Number systems- Rounding in different bases worksheet

Mr Maseko

Try this

We are used to rounding numbers based on place value.



- 1) Come up with rules for rounding to the nearest 5, 50 and 500
- What is the smallest number that rounds to 5, 50 or 500?
- What is the largest number that rounds to 5, 50 or 500?
- What similarities and differences are there with rounding to the nearest 10, 100 and 100?

2) When rounding to the nearest 500, what is the smallest number that rounds to 10000?

Connect

100s	10s	ไร

2	49s	7s	ไร

Write 34₁₀ in base 7.

```
Round to the nearest 10<sub>7.</sub>
```

```
How does this compare to rounding 34_{10} to the nearest 10_{10}?
```

How do you decide whether to round up or down?

Connect

100s	10s	าร

25s	5s	ไร

Write 34₁₀ in base 5.

```
Round to the nearest 10<sub>5</sub>.
```

```
How does this compare to rounding 34_{10} to the nearest 10_{10}?
```

How do you decide whether to round up or down?

Connect

100s	10s	าร

64	í+S	8s	ไร

Write 34₁₀ in base 8.

```
Round to the nearest 10_{8}.
```

```
How does this compare to rounding 13_{10} to the nearest 10_{10}?
```

How do you decide whether to round up or down?

Independent task

- 1) Round 23_5 to the nearest 10_5
- 2) Round 12_7 to the nearest 10_7
- 3) Round 13_6 to the nearest 10_6
- 4) Round 21_4 to the nearest 10_8
- 5) Round 103_8 to the nearest 100_8

What do you notice when rounding even and odd bases?

How do you decide to round up or down?

Explore

Design a decimal place value grid for base 5.

Fives	Ones	 	

Is it possible to write decimals in base 10 and base 5?

Find numbers where its possible

What do you notice about them?

What numbers can not be written in both bases? Why?

