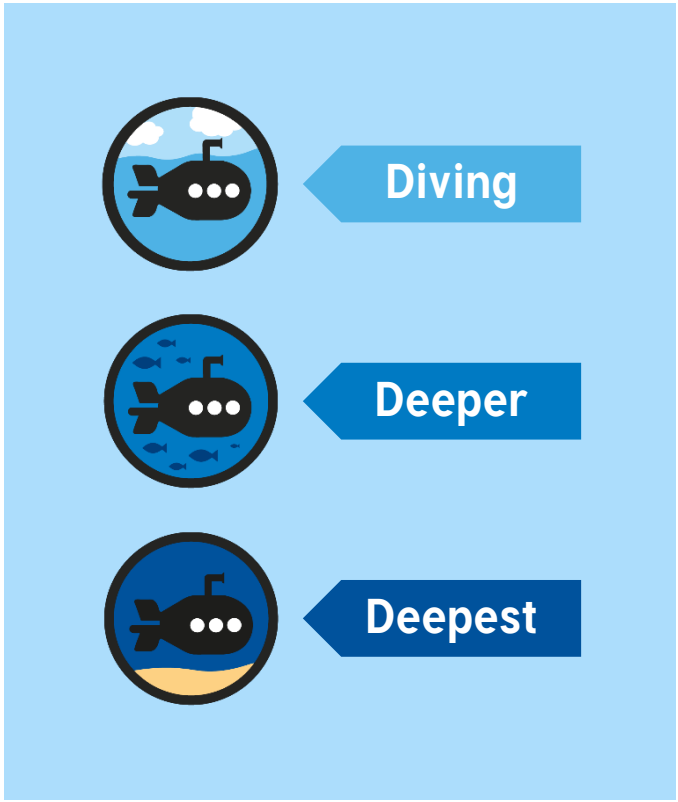
Diving into Mastery

Divide by 10, 100 and 1000

Diving into Mastery Guidance for Educators

Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:



These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.

Aim

- Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.

Divide by 10, 100 and 1000

Diving

What number is shown on the place value chart?

37 000

HTh	TTh	Th	H	T	O
	● ● ●	● ● ● ● ● ● ●			

Complete the sentences:

If I divide this number by 10, it becomes **3700**.
The digits move **one** place to the **right**.

If I divide this number by 100, it becomes **370**.
The digits move **two** places to the **right**.

If I divide this number by 1000, it becomes **37**.
The digits move **three** places to the **right**.

Divide by 10, 100 and 1000

Diving

How many decades are there in...

3750 years? **375 decades**

90 230 years? **9023 decades**

How many centuries are there in...

65 500 years? **655 centuries**

320 100 years? **3201 centuries**

How many millennia are there in...

62 000 years? **62 millennia**

804 000 years? **804 millennia**

Complete these calculations:

6500 ÷ **100** = 65

52 700 ÷ 100 = 527

632 000 ÷ 1000 = **632**

Mon	Tue	Wed	Thur	Fri	Sat	Sun
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
18	19	20	21	22	23	24

Divide by 10, 100 and 1000

Deeper

To divide by 1000, I can divide by 10, then divide by 10 and divide by 10 again.

Do you agree with Jason?
Explain your thinking.

Jason is correct.

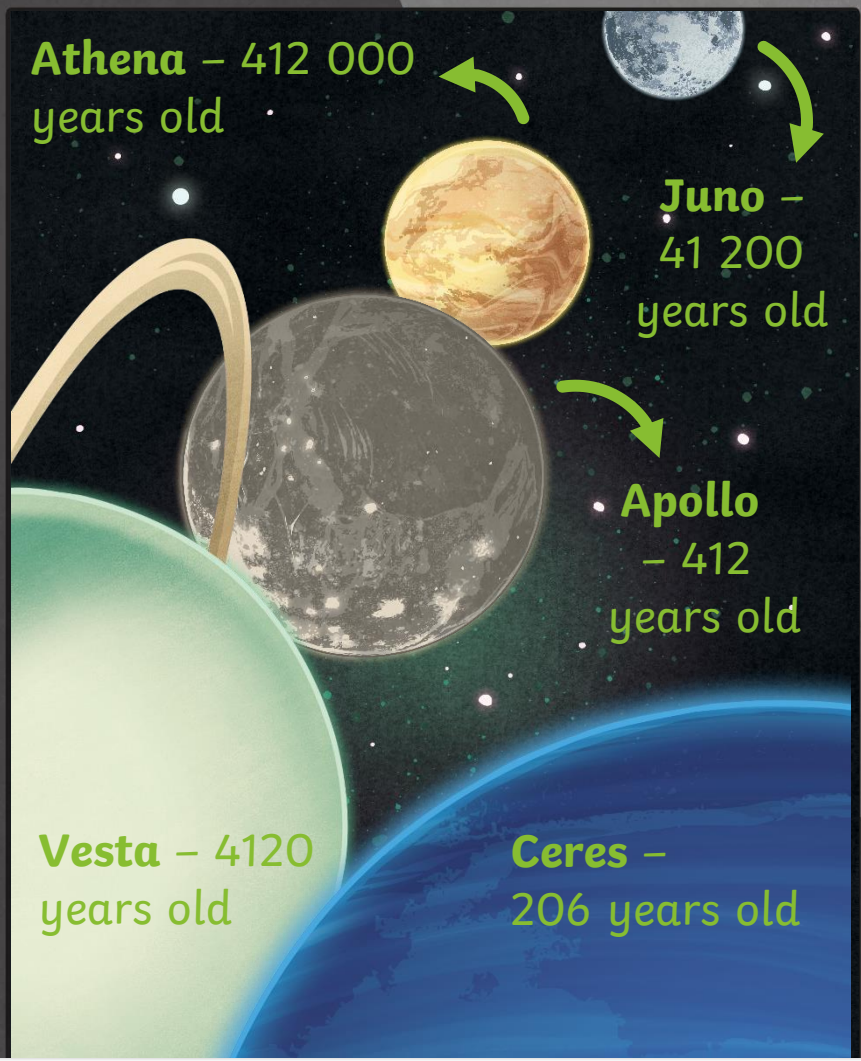
$10 \times 10 \times 10 = 1000$

Therefore, dividing by 10 three times is the same as dividing by 1000.

Divide by 10, 100 and 1000 | Deeper

Using the clues below, can you work out the ages of these new planets?

- Vesta is 100 times younger than Athena.
- Athena is double the age of Vulcan.
- Juno is 10 times younger than Athena.
- Ceres is 1000 times younger than Vulcan.
- Vulcan is 206 000 years old.
- Apollo is 1000 times younger than Athena.



Divide by 10, 100 and 1000

Deepest

Insert each of the numbers, **10**, **100** and **1000**, to make this statement true.

43 000 ÷ ☐ < 527 000 ÷ ☐ > 65 000 ÷ ☐

How many solutions are there?

There are 2 solutions:

43 000 ÷ 1000 < 527 000 ÷ 10 > 65 000 ÷ 100

Possible solutions include the following:

43 000 ÷ 100 < 527 000 ÷ 10 > 65 000 ÷ 1000

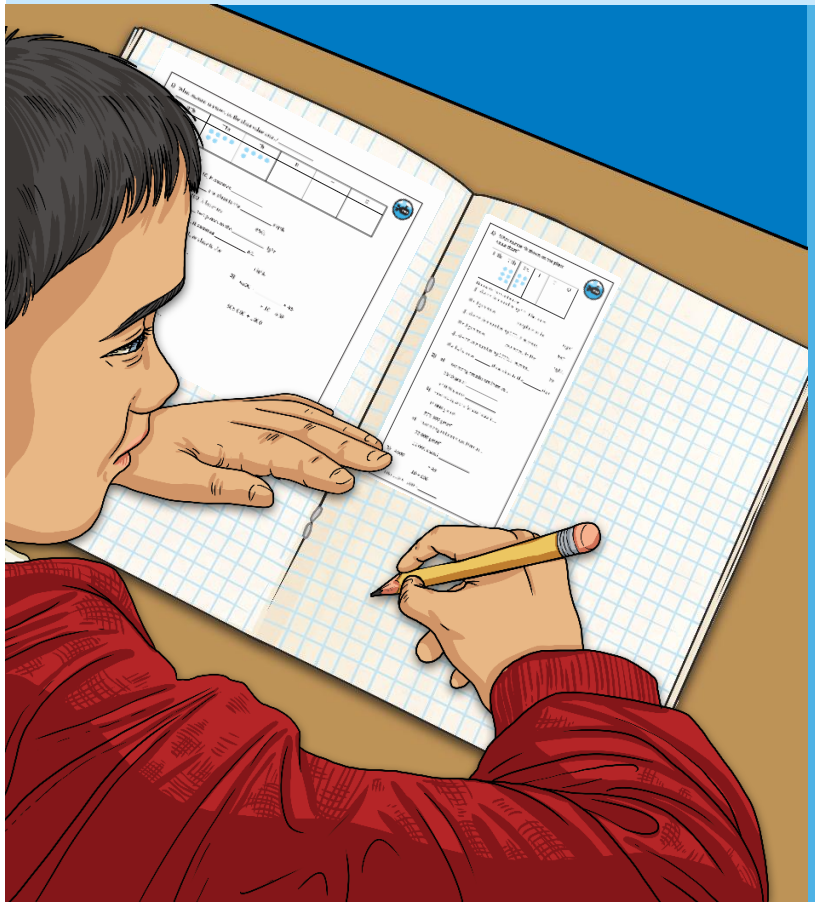
A = 72 000 B = 850 000

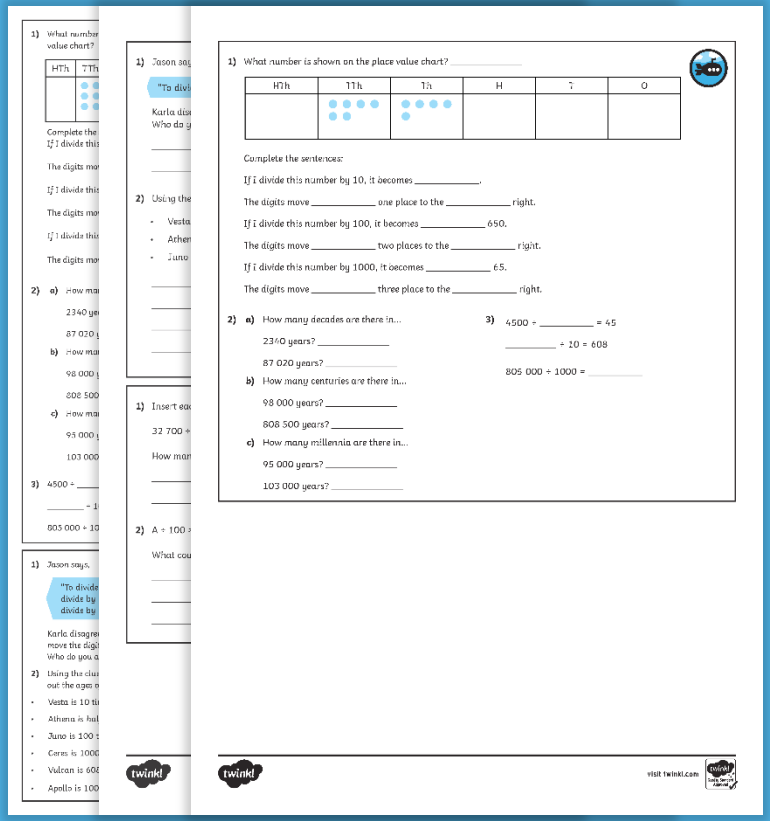
A = 63 300 B = 950 000

A = 75 000 B = 820 000

Divide by 10, 100 and 1000

Dive in by completing your own activity!





1) What number is shown on the place value chart?

HTh	TTh	Th	H	T	O
	● ● ● ● ●	● ● ● ● ●			

Complete the sentences:

If I divide this number by 10, it becomes _____.

The digits move _____ one place to the _____ right.

If I divide this number by 100, it becomes _____ 650.

The digits move _____ two places to the _____ right.

If I divide this number by 1000, it becomes _____ 65.

The digits move _____ three place to the _____ right.

2) a) How many decades are there in...

2340 years? _____

87 020 years? _____

b) How many centuries are there in...

98 000 years? _____

808 500 years? _____

c) How many millennia are there in...

95 000 years? _____

103 000 years? _____

3) 4500 ÷ _____ = 45

_____ ÷ 10 = 608

805 000 ÷ 1000 = _____

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