Week 9, Day 1

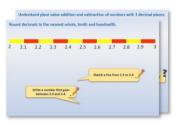
Add/ subtract 1, 10, 100, 1000, 10,000 and 100,000 to/ from 6-digit numbers

Each day covers one maths topic. It should take you about 1 hour or just a little more.

1. If possible, watch the **PowerPoint presentation** with a teacher or another grown-up.



OR start by carefully reading through the **Learning Reminders**.



Tackle the questions on the Practice Sheet.
 There might be a choice of either Mild (easier) or Hot (harder)!
 Check the answers.

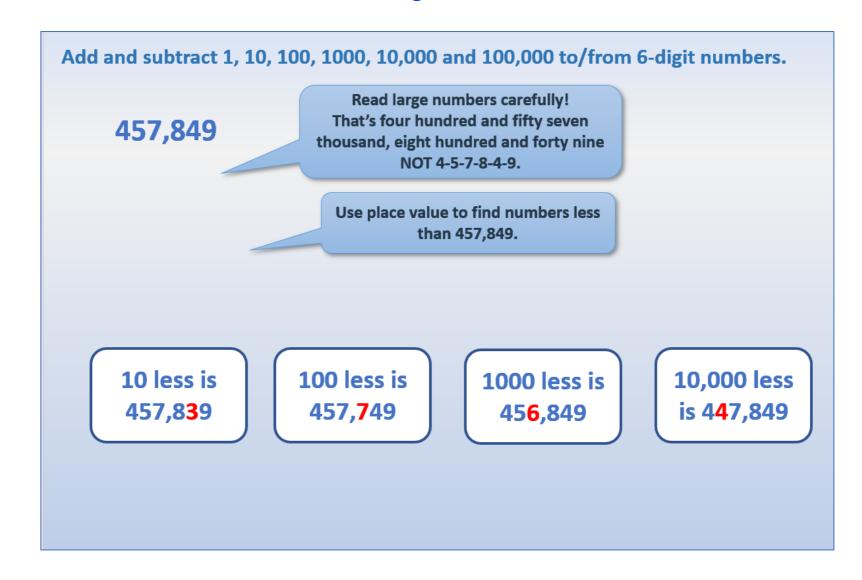


3. Finding it tricky? That's OK... have a go with a grown-up at A Bit Stuck?



4. Think you've cracked it? Whizzed through the Practice Sheets? Have a go at the **Investigation**...

Learning Reminders



Learning Reminders



457,849

We can find 10, 100, 1000 or 10,000 more than 457,849 in the same way.

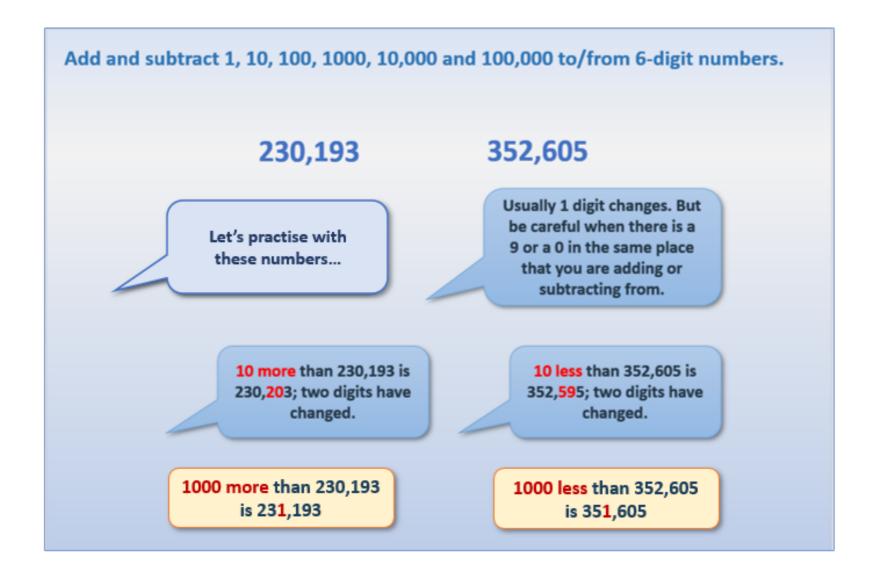
10 more is 457,8**5**9

100 more is 457,<mark>9</mark>49

1000 more is 458,849

10,000 more is 467,849

Learning Reminders



Practice Sheet Mild

Adding and subtracting 1, 10, 100, 1000, 10,000 and 100,000

1.
$$456,237 + 1$$

$$3. \quad 347,329 + 100,$$

$$8. \quad 235,429 + 300,$$

Challenge

Subtract multiples of 1, 10, 100, 1000, 10,000 and 100,000 from 659,174 to give an answer of 111,111.

Practice Sheet Hot

Adding and subtracting 1, 10, 100, 1000, 10,000 and 100,000

1.
$$345,784 + 100,000, 345,784 - 100,000$$

6.
$$473,699 + 1$$
, $473,699 + 10$

Challenge

Subtract multiples of 1, 10, 100, 1000, 10,000 and 100,000 from 659,174 to give an answer of 111,111.

Practice Sheets Answers

Adding and subtracting 1, 10, 100, 1000, 10,000 and 100,000 (mild)

1.	456,237 + 1 = 456,238	456,237 - 1 = 456,236
2.	578,483 + 10 = 578,493	578,483 - 10 = 578,473
3.	347,329 + 100 = 347,429	347,329 - 100 = 347,229
4.	235,820 + 1000 = 236,820	235,820 - 1000 = 234,820
5.	658,231 + 10,000 = 668,231	658,231 - 10,000 = 648,231
6.	345,784 + 100,000 = 445,784	345,784 - 100,000 = 245,784
7.	456,378 + 20 = 456,398	456,378 - 20 = 456,358
8.	235,429 + 300 = 235,729	235,429 - 300 = 235,129
9.	428,375 + 20,000 = 448,375	428,375 - 20,000 = 408,375

Challenge

659,174 - 500,000 - 40,000 - 8000 - 60 - 3 = 111,111

Adding and subtracting 1, 10, 100, 1000, 10,000 and 100,000 (hot)

1.	345,784 + 100,000 = 445,784	345,784 - 100,000 = 245,784
2.	456,378 + 20 = 456,398	456,378 - 20 = 456,358
3.	235,429 + 300 = 235,729	235,429 - 300 = 235,129
4.	428,375 + 20,000 = 448,375	428,375 - 20,000 = 408,375
5.	324,790 + 10 = 324,800	324,790 - 10 = 324,780
6.	473,699 + 1 = 473,700	473,699 + 10 = 473,709
7.	299,999 + 1 = 300,000	299,999 - 1 = 299,998
8.	500,000 - 1 = 499,999	500,000 - 10 = 499,990
9.	300.000 - 100 = 299.900	300.000 - 1000 = 299.000

Challenge

659,174 - 500,000 - 40,000 - 8000 - 60 - 3 = 111,111

A Bit Stuck? Is that your final answer?

Work in pairs

Things you will need:

- A pencil
- +/- 1, 10, 100, 1000 and 10,000 cards



What to do:

- Shuffle the \pm /- 1, 10, 100, 1000 and 10,000 cards.
- Take three.
- Both of you write 55,555 at the top of a piece of paper.
- Add or subtract the number on the first card.
 Write the answer underneath 55.555.
- Add or subtract the number on the next card.
 Write the new answer.
- Finally add or subtract the number on the last card. Write the answer.
- Both say your final answer.
 Did you both say the same number?
 If so, you win 1000 points.
- See if you can win 10,000 points before time is up!

0	
0	55,555
0	54,555
	54,655
	64,655
0	

S-t-r-e-t-c-h:

Secretly choose a card. Start with 55,555 and add/subtract the number on the card. Write the answer and show it to your partner. Can your partner guess what was on the card? Swap roles and repeat.

Learning outcomes:

- I know the value of each digit in 5-digit numbers.
- ·I can add and subtract 1, 10, 100, 1000 and 10,000 to/from 5-digit numbers.
- I am beginning to use place value to identify what has been added/subtracted to make a 5-digit number.

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A Bit Stuck?
Is that your final answer?

+ |

+10

+100

+1000

+10,000

-1

-10

-100

-1000

-10,000

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Investigation

Lost digit

Ask your partner to write a six-digit number
 all the digits must be different.

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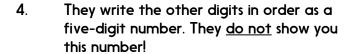
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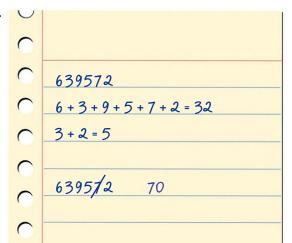
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CM3

11

- 2. Add the digits and keep adding to find the digital root of the number. Write this down.
- 3. Ask your partner to take their original six-digit number and, without showing you, to cross out one of the digits. They note the digit they crossed out and also its value.





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- 5. Ask them to subtract the digital root you wrote down from their new number.
- 6. Ask them to add the digits of their answer and keep adding to find its digital root. They tell you its digital root, but still do not show you their number!
- 7. Subtract their digital root from 9. This will be the digit that they crossed out. Say its value (refer to the original number).
- 8. Repeat, swapping roles.

Try this at least three times each, so you have tried at least six numbers. Remember their digits must always be different. Does it always work?

Try different types of number, e.g. five-digit or four-digit numbers; multiples of 10 or 100; even numbers, odd numbers, etc.

Can you make any suggestions as to why 9 is crucial?

X

Cm³

1/2

5/6

cm

 m^2

1/3