

Learning Reminders

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

457,849

Read large numbers carefully!
That's four hundred and fifty seven
thousand, eight hundred and forty nine
NOT 4-5-7-8-4-9.

Use place value to find numbers less
than 457,849.

10 less is
457,839

100 less is
457,749

1000 less is
456,849

10,000 less
is 447,849

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

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,**9**49

1000 more
is 45**8**,849

10,000 more
is 4**6**7,849

Learning Reminders

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

230,193

Let's practise with these numbers...

10 more than 230,193 is 230,**203**; two digits have changed.

1000 more than 230,193 is **231,193**

352,605

Usually 1 digit changes. But be careful when there is a 9 or a 0 in the same place that you are adding or subtracting from.

10 less than 352,605 is 352,**595**; two digits have changed.

1000 less than 352,605 is **351,605**

Practice Sheet Mild

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

- | | | | | | |
|----|---------------------|--------------------|----|----------------------|---------------------|
| 1. | $456,237 + 1,$ | $456,237 - 1$ | 6. | $345,784 + 100,000,$ | $345,784 - 100,000$ |
| 2. | $578,483 + 10,$ | $578,483 - 10$ | 7. | $456,378 + 20,$ | $456,378 - 20$ |
| 3. | $347,329 + 100,$ | $347,329 - 100$ | 8. | $235,429 + 300,$ | $235,429 - 300$ |
| 4. | $235,820 + 1000,$ | $235,820 - 1000$ | 9. | $428,375 + 20,000$ | $428,375 - 20,000$ |
| 5. | $658,231 + 10,000,$ | $658,231 - 10,000$ | | | |

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

2. $456,378 + 20$, $456,378 - 20$

3. $235,429 + 300$, $235,429 - 300$

4. $428,375 + 20,000$, $428,375 - 20,000$

5. $324,790 + 10$, $324,790 - 10$

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

7. $299,999 + 1$, $299,999 - 1$

8. $500,000 - 1$, $500,000 - 10$

9. $300,000 - 100$, $300,000 - 1000$

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?

+1

+10

+100

+1000

+10,000

-1

-10

-100

-1000

-10,000

Investigation

Lost digit

1. Ask your partner to write a six-digit number – all the digits must be different.
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.
4. They write the other digits in order as a five-digit number. They do not show you this number!
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.

○	
○	
○	639572
○	$6+3+9+5+7+2=32$
○	$3+2=5$
○	
○	$639572 \quad 70$
○	

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?