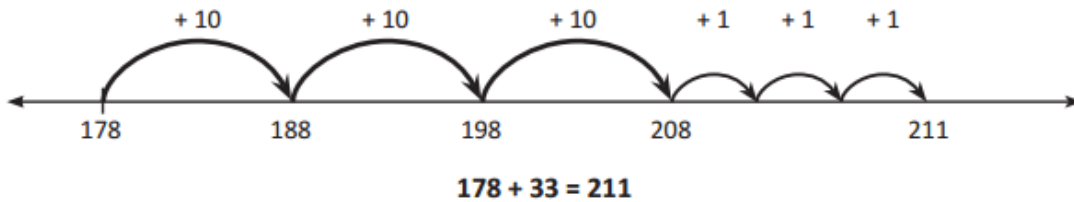


Math Strategies for Addition and Subtraction

➤ Jump Strategy

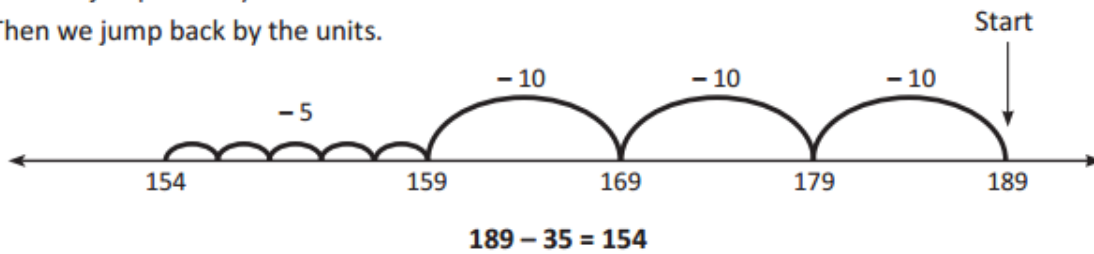
When we add we can use the jump strategy to help us. Look at how we do this with $178 + 33$.

- 1 First we jump up by the tens.
- 2 Then we jump up by the units.



When we subtract we can use the jump strategy to help us. Look at $189 - 35$:

- 1 First we jump back by the tens.
- 2 Then we jump back by the units.



➤ Split Strategy

Follow these steps when using the split strategy for addition or subtraction:

- 1 Split the second number into its different place values.
- 2 Add or subtract each part in turn.

$$\begin{aligned} 347 + 178 &\rightarrow 347 + 100 = 447 \\ 447 + 70 &= 517 \\ 517 + 8 &= 525 \\ 347 + 178 &= 525 \end{aligned}$$

Remember that
 178 is $100 + 70 + 8$



REMEMBER

When subtracting large numbers in our heads it can be easier to split the number to be subtracted into parts and work with each part separately.

A diagram showing the number 215 split into three parts: 200, 10, and 5. The equation $468 - 215 = 253$ is shown below the diagram.

$$468 - 215 \rightarrow 468 - 200 = 268 \rightarrow 268 - 10 = 258 \rightarrow 258 - 5 = 253$$

$468 - 215 = 253$

215 is $200 + 10 + 5$



REMEMBER

➤ Compensation Strategy

Sometimes we round one number in the problem to make it easier to use in our heads. Then we adjust our answer to compensate:

$$235 + 68 = \boxed{303}$$

$235 + 70 \overset{-2}{\circlearrowleft}$ We rounded up by 2,
which means we added 2

$305 \overset{-2}{\circlearrowleft} = 303$ too many so we subtract 2.

$$325 + 41 = \boxed{366}$$

$325 + 40 \overset{+1}{\circlearrowleft}$ We rounded down by 1,
which means we subtracted

$365 \overset{+1}{\circlearrowleft} = 366$ 1 too few, so we add 1 back.

Sometimes we round one number in the problem to make it easier to do in our heads. Then we adjust our answer to compensate:

$$125 - 49 = \boxed{76}$$

$125 - 50 \overset{+1}{\circlearrowleft}$ I rounded up by 1, which
means I subtracted 1 extra

$75 \overset{+1}{\circlearrowleft} = 76$ so we need to add 1 back.

I took off
1 extra so
I have to
add 1 back.



THINK

➤ Vertical Method

	Th	H	T	U
	1	¹ 2	¹ 4	8
+		4	5	7
	1	7	0	5

We can add using a written strategy.

First we estimate what the answer will be: $1\ 248 + 457 =$ is around 1700.

We start by adding the units: $8 + 7 = 15$ units. We can rename this as 1 ten and 5 units. We put the 5 units in the units column and carry the 10 to the tens column.

4 tens add 5 tens is 9 tens plus the carried 10 makes 10 tens. We rename this as 1 hundred and 0 tens.

We put the zero in the tens column and carry the 1 hundred.

2 hundreds add 4 hundreds makes 6 hundreds plus the carried hundred makes 7 hundreds. We put the 7 in the hundreds column.

There is 1 thousand in the thousand column so we simply put the 1 in the thousand column at the bottom.

	Th	H	T	U
	7	7 ¹ 4	2	
+	6	1	5	1
	1	6	9	1

We can subtract using a written strategy.

First we estimate what the answer will be: $7\ 842 - 6\ 151 =$ around 1 650.

We start by subtracting the units: $2 - 1 = 1$ unit. We put the unit in the units column.

We can't do 4 tens subtract 5 tens so we need to rename one of the hundreds as a ten. We now have 14 tens which makes 140.

$14\ tens - 5\ tens = 9\ tens$. We put the 9 in the tens column.

As we borrowed one hundred, we now have 7 hundreds left in the hundreds column. 7 hundreds subtract 1 hundred is 6 hundreds.

We put 6 in the hundreds column.

7 thousands - 6 thousands is 1 thousand. We put 1 in the thousand column.

We then check the answer against our estimate. Are the answer and estimate similar?