

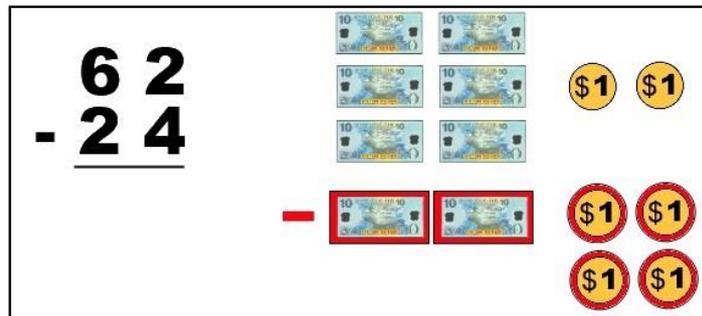
Two Digit Subtraction

-on the way to long subtraction-

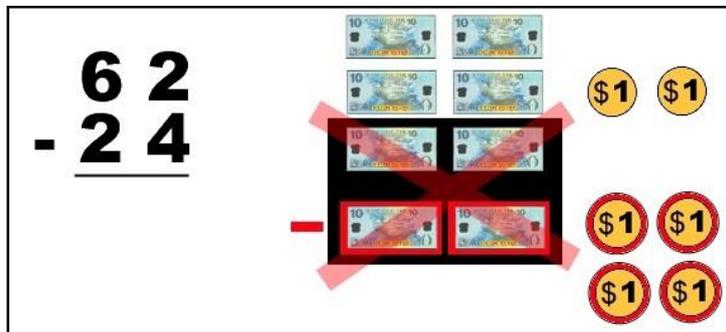
We are going to go into close detail to look at what's happening when we subtract 24 from 62. The 62 is modelled with 6 ten dollar notes and 2 one dollar coins.

The amount to subtract is also shown.

The 24 is modelled with 2 tens (in red) and 4 ones (in red)



First step is to subtract the 2 tens from the top lot of 6 tens leaving 4 ten dollar bills:



That leaves us with just 4 ten dollar bills and 2 ones. And we still need to subtract the 4 one dollar coins in red:

62
- 24

4

Four 10-dollar bills and four 1-dollar coins are shown to the right of the problem.

Well, we just can't do that!
 We could make a start by subtracting
 the 2 dollar coins we do have:

62
- 24

4

The four 1-dollar coins are crossed out with a large red 'X', while the four 10-dollar bills remain available.

That brings us to a standstill.
 We still need to take away another
 2 dollars but we don't have the coins to do it.

62
- 24

4 ?

Only two 1-dollar coins are shown to the right, indicating that the remaining two dollars cannot be subtracted.

Here's our solution to the problem:
 Cash in one of the ten dollar bills at the bank.
 Exchange it for 10 shiny one dollar coins.
 Then we can take away the 2 dollars:

Notice that if we do this
 we no longer have 4 ten dollar bills left!
 It has to go down to 3 of them.

So that's what we are up to.
 Now we CAN take away the 2 one-dollar coins.

Let's take away the 2 one-dollar coins.

That will leave us with 8 coins left.

Let's go over that in summary:

Take the 20 off the 60 to leave 40 apparently...
But when we try to take 4 off 2 in the units we can't.

We still have 2 "left over" which we didn't take away.

So we need to cash in a \$10 bill.

We can now take away the
2 "left over which we haven't taken away"
from the TEN ones
which leaves 8.

The final answer is 38:

The box contains a subtraction problem on the left:
$$\begin{array}{r} 62 \\ - 24 \\ \hline 38 \end{array}$$
 The numbers 3 and 8 in the result are highlighted in green. In the center, there are three ten-dollar bills. On the right, there are seven one-dollar coins arranged in a cluster.