

Give and Take

CBSE, Maths, Class III

This is an illustrative activity to teach place value

Drawing a Representation of 3 - Digit

Subtraction Eg : 594 - 342

■ - 100's ;

□ - 10's ;

○ - Ones

<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td></tr> <tr><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td></tr> </table>											<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td></tr> <tr><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td></tr> </table>											<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td></tr> <tr><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td></tr> </table>										
Hundreds	Tens	Ones																														
□	□	□																														

In the above figure you can see six grids. Let the first column from the right represent the ones and the middle column grids represent the tens and left must represent hundreds.

First we represent 594 as shown below

<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 20%; height: 20%;">■</td><td style="width: 20%; height: 20%;">■</td><td style="width: 20%; height: 20%;">■</td><td style="width: 20%; height: 20%;">■</td><td style="width: 20%; height: 20%;">■</td></tr> <tr><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td></tr> </table>	■	■	■	■	■						<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 20%; height: 20%;">□</td><td style="width: 20%; height: 20%;">□</td><td style="width: 20%; height: 20%;">□</td><td style="width: 20%; height: 20%;">□</td><td style="width: 20%; height: 20%;">□</td></tr> <tr><td style="width: 20%; height: 20%;">□</td><td style="width: 20%; height: 20%;">□</td><td style="width: 20%; height: 20%;">□</td><td style="width: 20%; height: 20%;">□</td><td style="width: 20%; height: 20%;"></td></tr> </table>	□	□	□	□	□	□	□	□	□		<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 20%; height: 20%;">○</td><td style="width: 20%; height: 20%;">○</td><td style="width: 20%; height: 20%;">○</td><td style="width: 20%; height: 20%;">○</td><td style="width: 20%; height: 20%;"></td></tr> <tr><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td></tr> </table>	○	○	○	○						
■	■	■	■	■																												
□	□	□	□	□																												
□	□	□	□																													
○	○	○	○																													
<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td></tr> <tr><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td></tr> </table>											<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td></tr> <tr><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td></tr> </table>											<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td></tr> <tr><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td><td style="width: 20%; height: 20%;"></td></tr> </table>										

After we represented 594, we take away 2 ones, 4 tens, and 3 hundreds by striking out and

Write down how many hundreds, ten and one left.

<table border="1" style="width: 100%; height: 40px;"> <tr> <td style="background-color: black; width: 20px; height: 20px;"></td> <td style="background-color: black; width: 20px; height: 20px;"></td> <td style="background-color: black; width: 20px; height: 20px; transform: rotate(45deg);"></td> <td style="background-color: black; width: 20px; height: 20px; transform: rotate(45deg);"></td> <td style="background-color: black; width: 20px; height: 20px; transform: rotate(45deg);"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>											<table border="1" style="width: 100%; height: 40px;"> <tr> <td style="width: 20px; height: 20px; text-align: center;">□</td> <td style="width: 20px; height: 20px; text-align: center;">□</td> <td style="width: 20px; height: 20px; text-align: center;">□</td> <td style="width: 20px; height: 20px; text-align: center;">□</td> <td style="width: 20px; height: 20px; text-align: center;">□</td> </tr> <tr> <td style="width: 20px; height: 20px; text-align: center;">□</td> <td style="width: 20px; height: 20px; text-align: center;">□</td> <td style="width: 20px; height: 20px; text-align: center;">□</td> <td style="width: 20px; height: 20px; text-align: center;">□</td> <td style="width: 20px; height: 20px;"></td> </tr> </table>	□	□	□	□	□	□	□	□	□		<table border="1" style="width: 100%; height: 40px;"> <tr> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>	○	○	○	○						
□	□	□	□	□																												
□	□	□	□																													
○	○	○	○																													
<table border="1" style="width: 100%; height: 40px;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>											<table border="1" style="width: 100%; height: 40px;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>											<table border="1" style="width: 100%; height: 40px;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>										
Hundreds	Tens	Ones																														
<table border="1" style="width: 40px; height: 40px; margin: auto;"> <tr> <td style="text-align: center; vertical-align: middle;">2</td> </tr> </table>	2	<table border="1" style="width: 40px; height: 40px; margin: auto;"> <tr> <td style="text-align: center; vertical-align: middle;">5</td> </tr> </table>	5	<table border="1" style="width: 40px; height: 40px; margin: auto;"> <tr> <td style="text-align: center; vertical-align: middle;">2</td> </tr> </table>	2																											
2																																
5																																
2																																

Following is an example where borrowing arises $246 - 147$

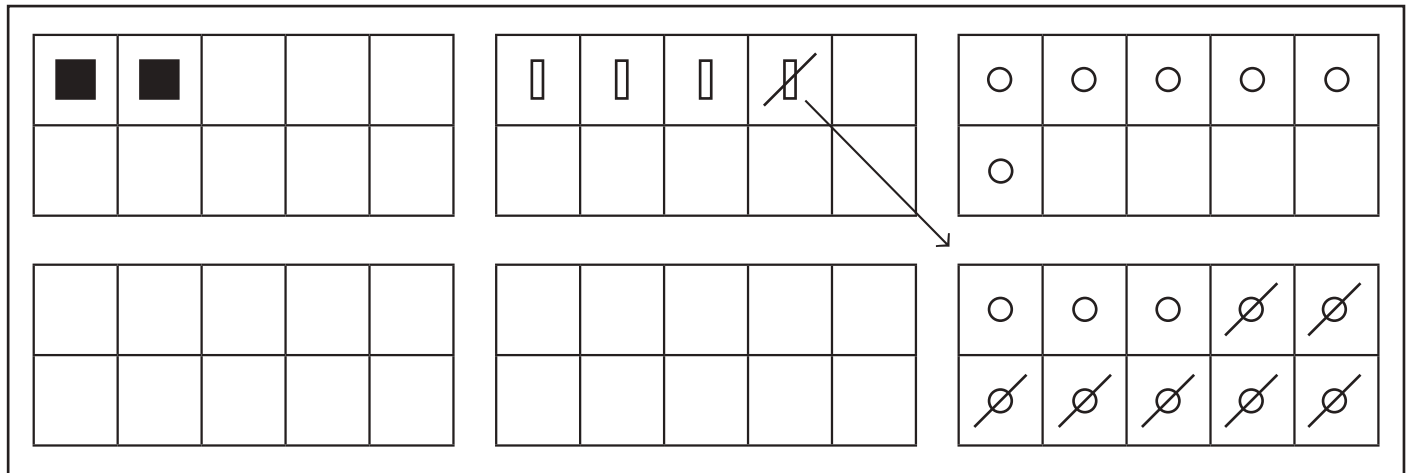
Representation of 246

<table border="1" style="width: 100%; height: 40px;"> <tr> <td style="background-color: black; width: 20px; height: 20px;"></td> <td style="background-color: black; width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>											<table border="1" style="width: 100%; height: 40px;"> <tr> <td style="width: 20px; height: 20px; text-align: center;">□</td> <td style="width: 20px; height: 20px; text-align: center;">□</td> <td style="width: 20px; height: 20px; text-align: center;">□</td> <td style="width: 20px; height: 20px; text-align: center;">□</td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>	□	□	□	□							<table border="1" style="width: 100%; height: 40px;"> <tr> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px; text-align: center;">○</td> </tr> <tr> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>	○	○	○	○	○	○				
□	□	□	□																													
○	○	○	○	○																												
○																																
<table border="1" style="width: 100%; height: 40px;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>											<table border="1" style="width: 100%; height: 40px;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>											<table border="1" style="width: 100%; height: 40px;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>										

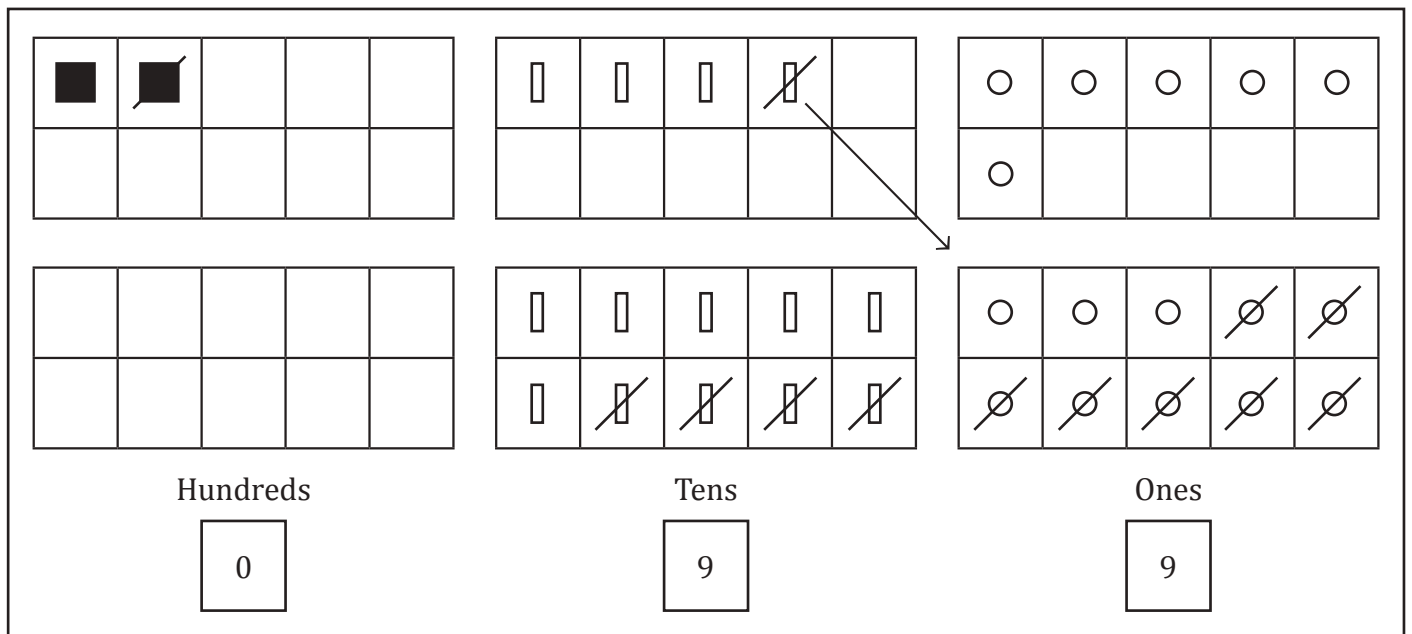
Here we can't take 7 away from 6 so we are supposed to borrow a ten from 40. The ten which we borrow has to be represented as 10 ones in the ones column grid which is in the second row. One ten in stricke out from tens grid

<table border="1" style="width: 100%; height: 40px;"> <tr> <td style="background-color: black; width: 20px; height: 20px;"></td> <td style="background-color: black; width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>											<table border="1" style="width: 100%; height: 40px;"> <tr> <td style="width: 20px; height: 20px; text-align: center;">□</td> <td style="width: 20px; height: 20px; text-align: center;">□</td> <td style="width: 20px; height: 20px; text-align: center;">□</td> <td style="width: 20px; height: 20px; text-align: center;">□</td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>	□	□	□	□							<table border="1" style="width: 100%; height: 40px;"> <tr> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px; text-align: center;">○</td> </tr> <tr> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>	○	○	○	○	○	○				
□	□	□	□																													
○	○	○	○	○																												
○																																
<table border="1" style="width: 100%; height: 40px;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>											<table border="1" style="width: 100%; height: 40px;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>											<table border="1" style="width: 100%; height: 40px;"> <tr> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px; text-align: center;">○</td> </tr> <tr> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px; text-align: center;">○</td> <td style="width: 20px; height: 20px; text-align: center;">○</td> </tr> </table>	○	○	○	○	○	○	○	○	○	○
○	○	○	○	○																												
○	○	○	○	○																												

Now seven ones can be taken away from 16 ones as show below



Similar way in followed to subtract tens as we can't take away 4 tens from 3 tens.



The above discussed activity can also be adopted for two or three digit addition.

For 2-digit number following worksheet can be used

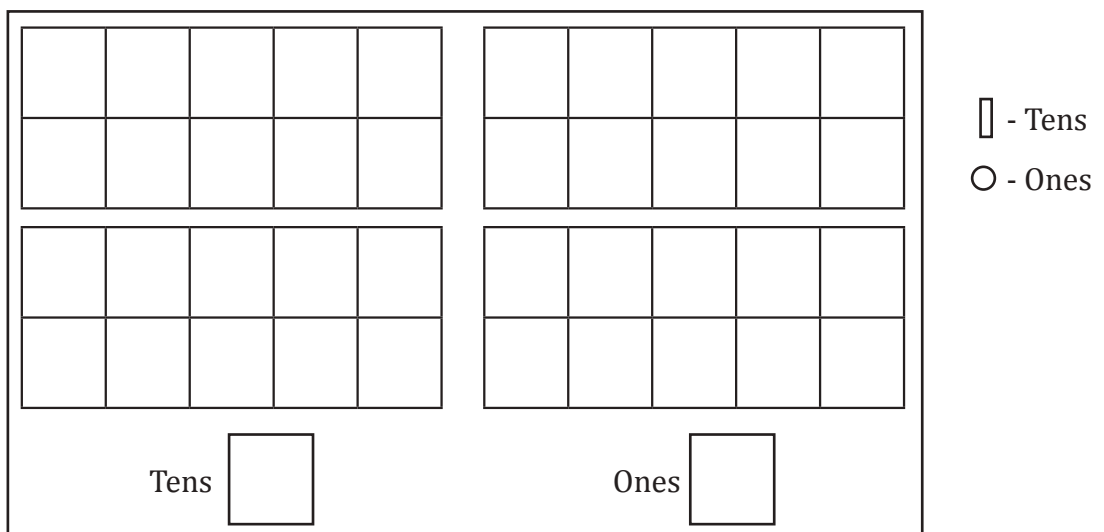


Illustration 1

$$346 + 248 = 594$$

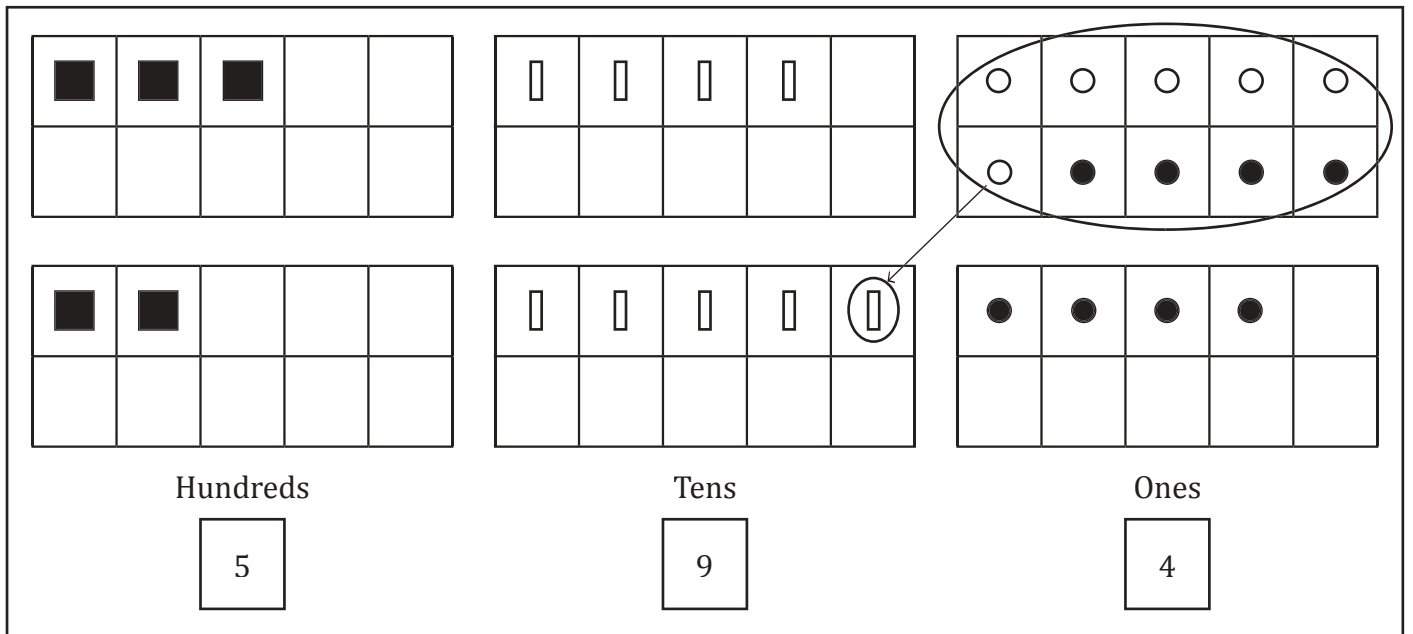
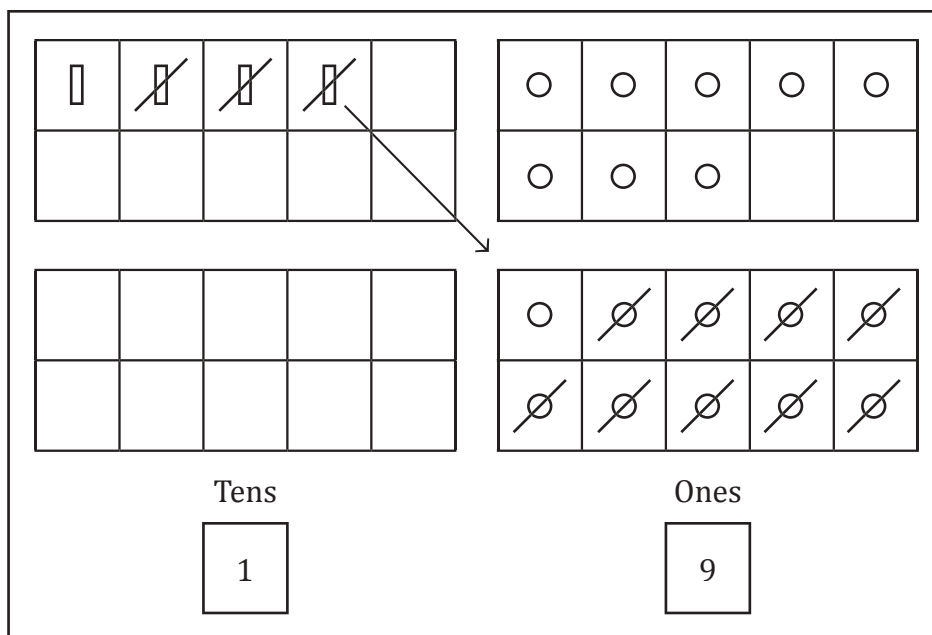


Illustration 2

$$48 - 29 = 19$$



K. James Kumar
PST, GPS Aranganur