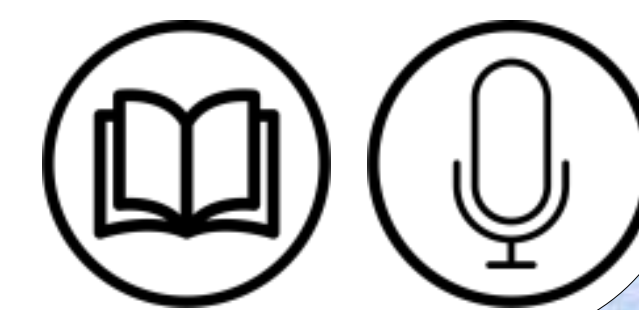
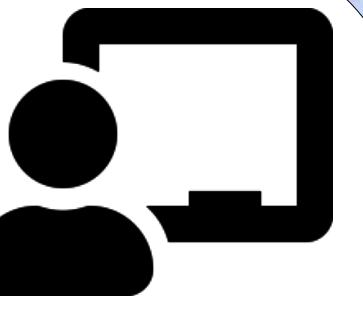




Addition using Decomposing





Adding numbers using decomposing

- It's a strategy that involves **breaking down numbers** into more manageable parts (by place value) and then **adding those parts** together.
- It's particularly useful for **mental math** and for enhancing **number sense**.

Steps for Addition Using Decomposing:

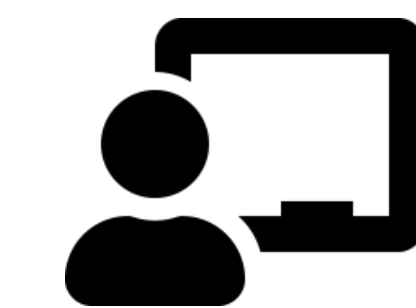
- ❖ Identify the numbers to be added.
- ❖ Choose a number to decompose.
- ❖ Break down the chosen number into place value parts (e.g., tens and ones).
- ❖ Add the decomposed parts to the other number.
- ❖ If necessary, regroup the decomposed parts to find the final sum.





Example 1:

Add $35 + 42$



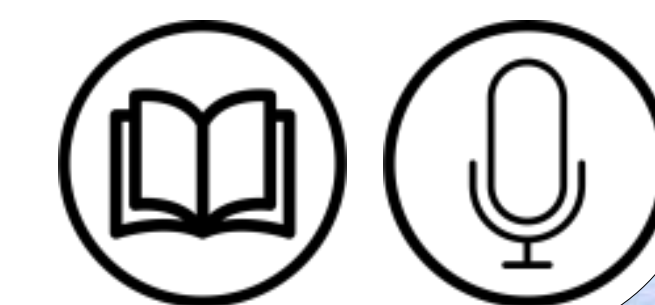
Solution:

$$\begin{aligned} 35 + 42 &= 30 + 5 + 42 \\ &= 30 + 5 + 40 + 2 \\ &= 30 + 40 + 5 + 2 \\ &= 70 + 7 \\ &= 77 \end{aligned}$$

35 can be written as $30 + 5$

42 can be written as $40 + 2$

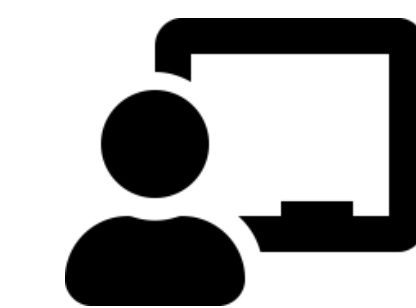
$$35 + 42 = 77$$





Example 2:

Add $12 + 51$



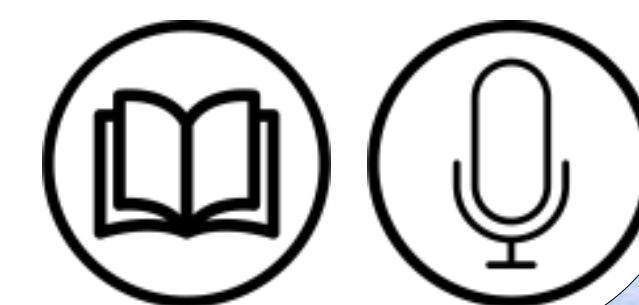
Solution:

$$\begin{aligned}12 + 51 &= 10 + 2 + 51 \\ &= 10 + 2 + 50 + 1 \\ &= 10 + 50 + 2 + 1 \\ &= 60 + 3 \\ &= 63\end{aligned}$$

12 can be written as $10 + 2$

51 can be written as $50 + 1$

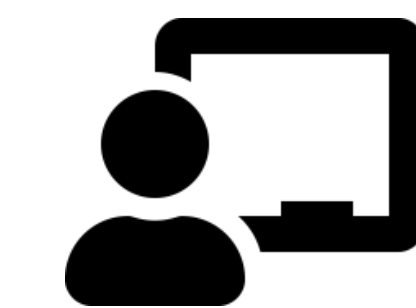
$$12 + 51 = 63$$





Example 3:

Add $24 + 65$

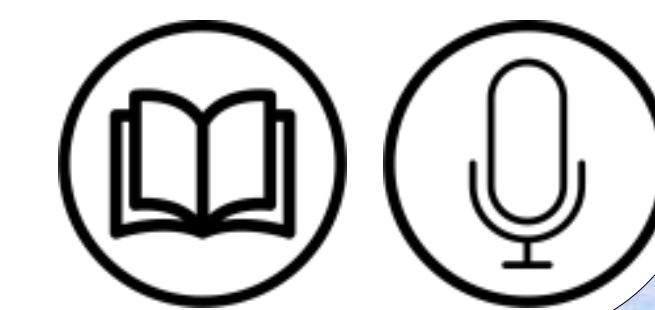


Solution:

$$\begin{aligned}24 + 65 &= 20 + 4 + 65 \\ &= 20 + 4 + 60 + 5 \\ &= 20 + 60 + 4 + 5 \\ &= 80 + 9 \\ &= 89\end{aligned}$$

24 can be written as $20 + 4$
65 can be written as $60 + 5$

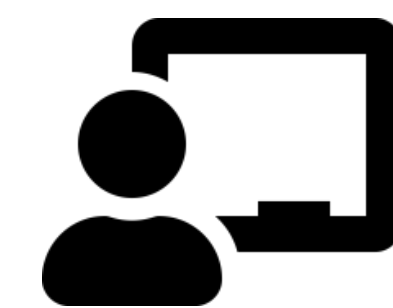
$$24 + 65 = 89$$





Example 4:

Add $46 + 14$

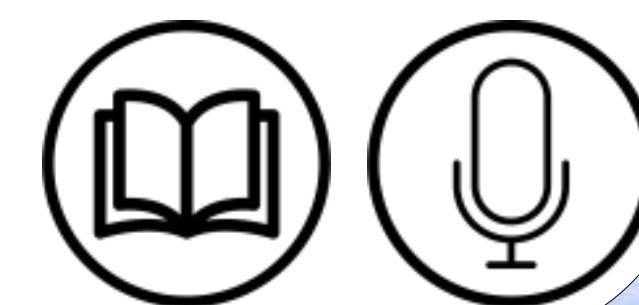


Solution:

$$\begin{aligned}46 + 14 &= 40 + 6 + 14 \\ &= 40 + 6 + 10 + 4 \\ &= 40 + 10 + 6 + 4 \\ &= 50 + 10 \\ &= 60\end{aligned}$$

46 can be written as $40 + 6$
14 can be written as $10 + 4$

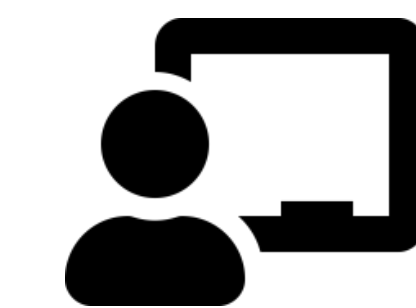
$$46 + 14 = 60$$





Example 5:

Add $47 + 40$



Solution:

$$\begin{aligned}47 + 40 &= 40 + 7 + 40 \\ &= 40 + 7 + 40 + 0 \\ &= 40 + 40 + 7 + 0 \\ &= 80 + 7 \\ &= 87\end{aligned}$$

47 can be written as $40 + 7$

40 can be written as $40 + 0$

$$47 + 40 = 87$$

