ADDITION

28 + 45

Front end/Splitting both numbers

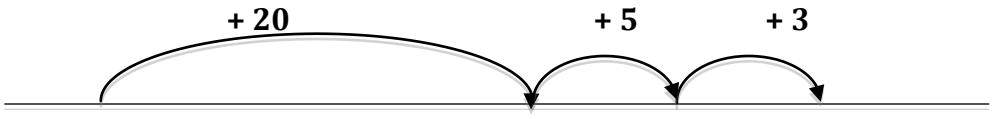
20 + 40 = 60
8 + 5 = 13
73

20 + 8
+ 40 + 5
60 + 13 = 73 (60 + 10 + 3)

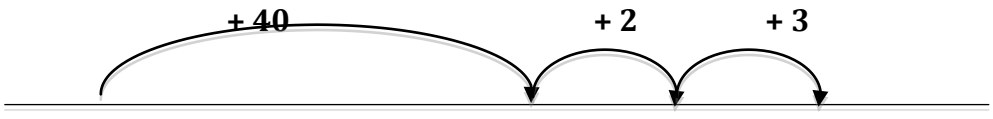
28 + 45
20 + 40 8 + 5
60 + 13
73

28
+ 45
13 (add ones)
60 (add tens)
73

Keeping One Number Whole, Taking Friendly Jumps
(Shown on Open Number Lines)



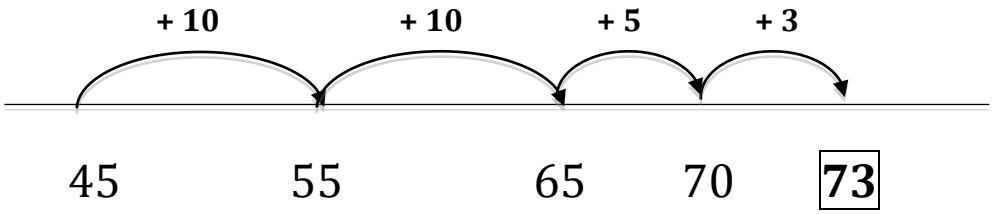
45 65 70 **73**



28 68 70 **73**

ADDITION continued 28 + 45

Or smaller friendly jumps of 10
(Shown on Open Number Lines)



Compensation

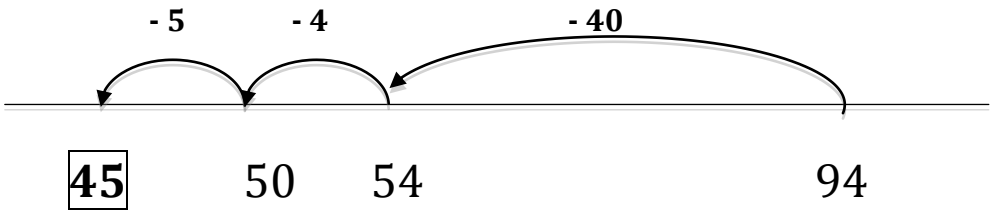
For 28 + 45, think "I know **30 + 45 = 75**
I added 2 extra so I need to subtract them":
75 – 2 = 73

Take 2 from 45 and give it to 28 to make a friendly number (30):

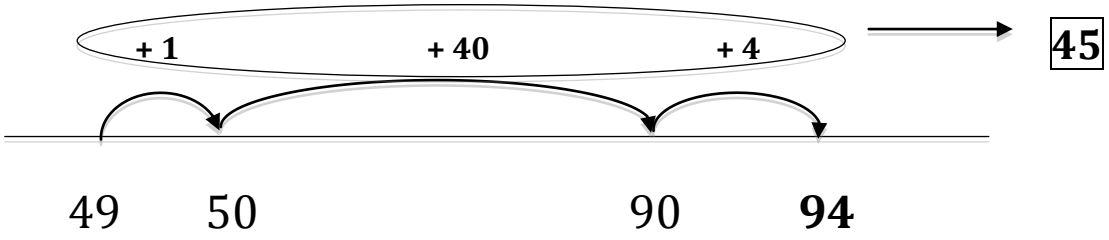
28 + 45
+2 ↓ ↓ -2
30 + 43 = 73

SUBTRACTION 94 - 49

Keeping One Number Whole, Taking Friendly Jumps
(Shown on Open Number Lines)



Think addition: 49 + ☐ = 94



Splitting both numbers

94 – 49 : There won't be enough ones, so I'll split 94 this way:

94 = 80 + 14
- 49 = 40 + 9 Now I can subtract
40 + 5 = **45**

SUBTRACTION **94 - 49**
cont'd

Compensation

For 94 - 49, think "I know **94 - 50 = 44**
I subtracted 1 extra so I need to add it back":
44 + 1 = 45

Constant Difference

Add 1 to both numbers to make a friendly number (50):

94 - 49
+1 ↓ ↓ +1
95 - 50 = 45