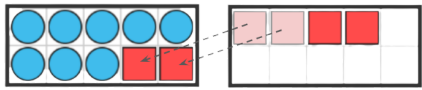


Addition: Making a Ten

(Friendly Numbers)

A friendly number is a number that is easy to work with. For example, multiples of 10 are "friendly" because they are easier to add or subtract.

Think about how $8 + 4$ can be thought of as $10 + 2$ instead.

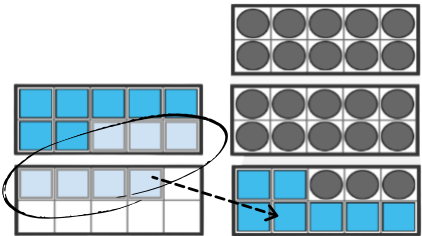


I can combine 8 and 2 to make a 10. This makes it easier to add.

$$10 + 2 = 12$$

We can use **ten frames** to model the problem.

$$14 + 23 =$$



I notice 14 can be broken into a double.

I can combine 23 and 7 to make a friendly number of 30.

$$7 + 30 = 37$$

Addition: Partial Sums

I can break apart both addends by place value

$$14 + 23 =$$

$$10 + 20 = 30$$

$$4 + 3 = 7$$

$$30 + 7 = 37$$

I can break apart one addend by place value

$$14 + 23 =$$

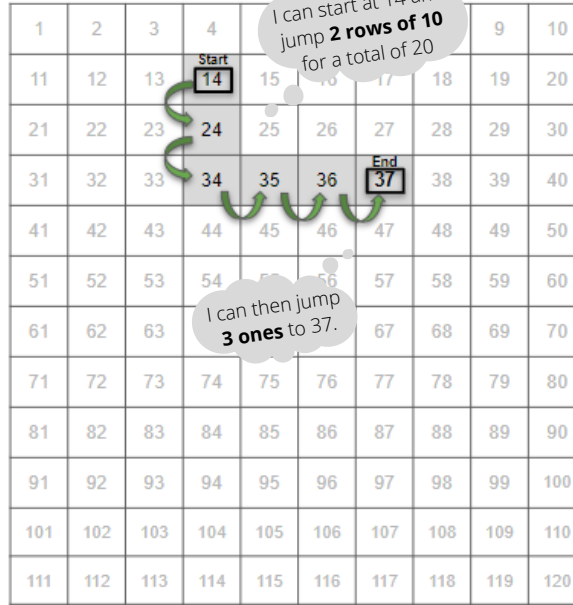
$$14 + 20 = 34$$

$$34 + 3 = 37$$

Addition: Hundred's Chart

$$14 + 23 =$$

20 (2 tens) 3 (3 ones)



I can start at 14 and jump 2 rows of 10 for a total of 20

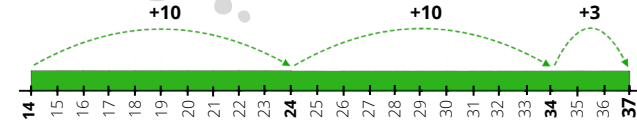
I can then jump 3 ones to 37.

Addition: Number Line

$$14 + 23 =$$

20 (2 tens) 3 (3 ones)

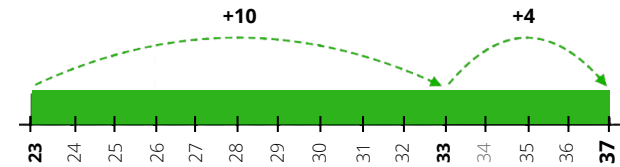
I can start at 14 and jump 2 tens and 3 ones to 37.



$$14 + 23 =$$

10 (1 ten) 4 (4 ones)

I can also start at 23 and jump 1 ten and 4 ones to 37.



Subtraction: Making a Ten

(Friendly Numbers)

$$14 - 6 =$$

4 2

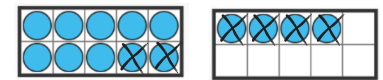
I can think of 6 as 2 + 4.

By taking away 4 from 14 I can make a ten.

$$14 - 4 = 10$$

$$10 - 2 = 8$$

Now I can take away the remaining 2 from 10.



Take away 2

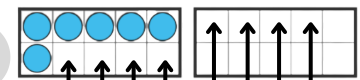
Take away 4

Counting Up

(think addition)

$$14 - 6 = \underline{\quad} \text{ is the same as } 6 + \underline{\quad} = 14$$

I can start with 6 and think how many more to 10.



$$6 + 4 = 10$$

$$10 + 4 = 14$$

$$\text{So } 6 + 8 = 14 \text{ and } 14 - 8 = 6$$

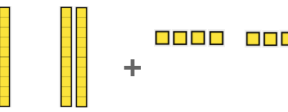
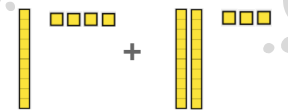
How many more from 10 to 14.

Addition: Base Ten

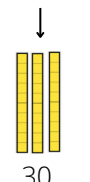
$$14 + 23 =$$

I start with 1 ten and 4 ones.

Then I add 2 tens and 3 ones.

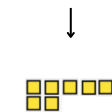


$$10 + 20 =$$



$$30$$

$$4 + 3 =$$



$$7$$

I can combine my ones.

$$14 + 23 = 37$$

Subtraction: Hundreds Chart

Counting Back

$$70 - 40 =$$

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

I can start at 70 and jump back 4 rows of 10 for a total of 40.

Counting Up

$$70 - 40 =$$

By **thinking** of subtraction as **addition**, I can **count up** to find the difference between two numbers.

$$40 + \underline{\quad} = 70$$

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

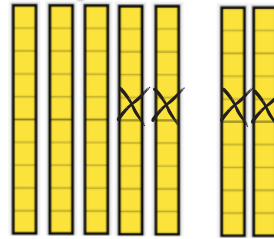
I can start at 40 and count up to 70.

The **difference** between 40 and 70 can be found by counting the total jumps. **3 jumps of ten = 30**

Subtraction: Base Ten

$$70 - 40 =$$

I start with 7 tens



I need to take away 4 tens

This leaves me with 3 tens

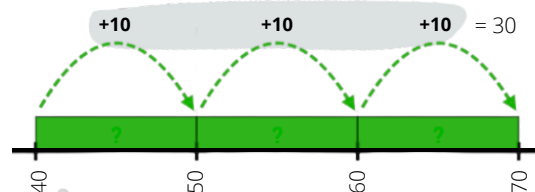
$$70 - 40 = 30$$

Subtraction: Number Line

$$70 - 40 =$$

I can **add up** the jumps of ten to find the **difference** between 40 and 70.

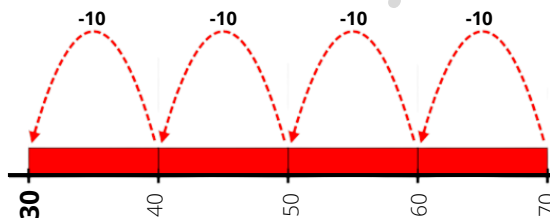
Counting Up
(think addition)



I can start at 40 and count up to 70.

I can start at 70 and count back by tens

Counting Back



Grade 1 Models and Strategies

- Addition
- Subtraction

This brochure highlights some of the models and strategies used to develop computational fluency through a deep understanding of place value, number sense, and properties of operations.

By learning multiple strategies, students think flexibly, make connections, and choose the most effective and efficient strategy for problem solving.

