

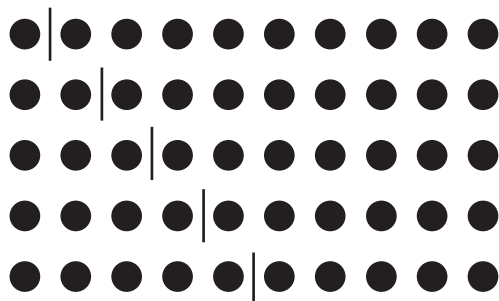
Patterns in Adding

☐ Separate.

☐ Write the number in different ways.



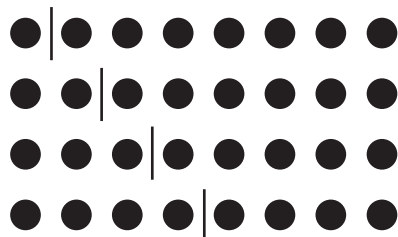
$$\begin{aligned} 6 &= 1 + \underline{5} \\ 6 &= 2 + \underline{4} \\ 6 &= 3 + \underline{3} \end{aligned}$$



$$\begin{aligned} 10 &= 1 + \underline{9} \\ 10 &= 2 + \underline{8} \\ 10 &= 3 + \underline{7} \\ 10 &= 4 + \underline{6} \\ 10 &= 5 + \underline{5} \end{aligned}$$



$$\begin{aligned} 7 &= 1 + \underline{6} \\ 7 &= 2 + \underline{5} \\ 7 &= 3 + \underline{4} \end{aligned}$$



$$\begin{aligned} 8 &= 1 + \underline{7} \\ 8 &= 2 + \underline{6} \\ 8 &= 3 + \underline{5} \\ 8 &= 4 + \underline{4} \end{aligned}$$

☐ Write 9 in different ways.

Sample answer

$$9 = \underline{1} + \underline{8}$$

Sample answer

$$9 = \underline{2} + \underline{7}$$

Sample answer

$$9 = \underline{3} + \underline{6}$$

Sample answer

$$9 = \underline{4} + \underline{5}$$

Adding Tens and Ones

☐ Write the number as a sum of 10s and 1s.

$$32 = \underline{10 + 10 + 10 + 1 + 1}$$

$$13 = \underline{10 + 1 + 1 + 1}$$

$$41 = \underline{10 + 10 + 10 + 10 + 1}$$

$$22 = \underline{10 + 10 + 1 + 1}$$

☐ We can write $24 = 20 + 4$. Write the number in the same way.

$$35 = \underline{30 + 5}$$

$$47 = \underline{40 + 7}$$

$$63 = \underline{60 + 3}$$

$$81 = \underline{80 + 1}$$

$$56 = \underline{50 + 6}$$

$$92 = \underline{90 + 2}$$

☐ Add.

$$40 + 5 = \underline{45}$$

$$6 + 20 = \underline{26}$$

$$70 + 1 = \underline{71}$$

$$8 + 60 = \underline{68}$$

$$70 + 7 = \underline{77}$$

$$4 + 50 = \underline{54}$$

$$30 + 8 = \underline{38}$$

$$9 + 10 = \underline{19}$$

$$6 + 80 = \underline{86}$$

$$7 + 90 = \underline{97}$$

$$9 + 70 = \underline{79}$$

$$90 + 9 = \underline{99}$$

☐ Add.

$$5 + 2 = \quad | + | + | + | + | \quad + \quad | + | \quad = \underline{7}$$

$$50 + 20 = \quad 10 + 10 + 10 + 10 + 10 \quad + \quad 10 + 10 \quad = \underline{70}$$

$$4 + 4 = \quad | + | + | + | \quad + \quad | + | + | + | \quad = \underline{8}$$

$$40 + 40 = \quad 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 \quad = \underline{80}$$

$$2 + 3 = \quad | + | \quad + \quad | + | + | \quad = \underline{5}$$

$$20 + 30 = \quad 10 + 10 \quad + \quad 10 + 10 + 10 \quad = \underline{50}$$

$$2 + 6 = \underline{8}$$

$$20 + 60 = \underline{80}$$

$$4 + 1 = \underline{5}$$

$$40 + 10 = \underline{50}$$

$$5 + 4 = \underline{9}$$

$$50 + 40 = \underline{90}$$

$$1 + 5 = \underline{6}$$

$$10 + 50 = \underline{60}$$

$$3 + 3 = \underline{6}$$

$$30 + 30 = \underline{60}$$

$$3 + 4 = \underline{7}$$

$$30 + 40 = \underline{70}$$

$$1 + 3 + 2 = \underline{6}$$

$$10 + 30 + 20 = \underline{60}$$

$$2 + 3 + 2 + 1 = \underline{8}$$

$$20 + 30 + 20 + 10 = \underline{80}$$

Adding in Two Ways

- ☐ Move the line one dot to the right. $\overrightarrow{\hspace{1cm}}$
- ☐ Write the new addition sentence.

<div style="display: flex; justify-content: space-between; align-items: center;"> <div>● ● ● ● ● ●</div> <div>$2 + 4 = 6$</div> </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <div>● ● ● ● ● ●</div> <div><u>$3 + 3 = 6$</u></div> </div>	<div style="display: flex; justify-content: space-between; align-items: center;"> <div>● ● ● ● ●</div> <div>$1 + 4 = 5$</div> </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <div>● ● ● ● ●</div> <div><u>$2 + 3 = 5$</u></div> </div>
<div style="display: flex; justify-content: space-between; align-items: center;"> <div>● ● ● ● ●</div> <div>$3 + 2 = 5$</div> </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <div>● ● ● ● ●</div> <div><u>$4 + 1 = 5$</u></div> </div>	<div style="display: flex; justify-content: space-between; align-items: center;"> <div>● ● ● ● ● ●</div> <div>$4 + 2 = 6$</div> </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <div>● ● ● ● ● ●</div> <div><u>$5 + 1 = 6$</u></div> </div>
<div style="display: flex; justify-content: space-between; align-items: center;"> <div>● ● ● ●</div> <div>$2 + 2 = 4$</div> </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <div>● ● ● ●</div> <div><u>$3 + 1 = 4$</u></div> </div>	<div style="display: flex; justify-content: space-between; align-items: center;"> <div>● ● ●</div> <div>$1 + 2 = 3$</div> </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <div>● ● ●</div> <div><u>$2 + 1 = 3$</u></div> </div>
<div style="display: flex; justify-content: space-between; align-items: center;"> <div> ● ● ● ●</div> <div>$0 + 4 = 4$</div> </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <div>● ● ● ●</div> <div><u>$1 + 3 = 4$</u></div> </div>	<div style="display: flex; justify-content: space-between; align-items: center;"> <div>● ● ● ●</div> <div>$3 + 1 = 4$</div> </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <div>● ● ● ● </div> <div><u>$4 + 0 = 4$</u></div> </div>

How does the first number change? It goes up by 1.

How does the second number change? It goes down by 1.

What happens to the total? It stays the same.

☐ Why does that happen? The total stays the same when the numbers being added change in opposite ways.

☐ Add and subtract 1 to make a new number sentence.

$$\begin{array}{rcccl} 2 & + & 5 & = & 7 \\ +1 & \downarrow & \downarrow & -1 & \\ \boxed{3} & + & \boxed{4} & = & \boxed{7} \end{array}$$

$$\begin{array}{rcccl} 3 & + & 8 & = & 11 \\ +1 & \downarrow & \downarrow & -1 & \\ \boxed{4} & + & \boxed{7} & = & \boxed{11} \end{array}$$

$$\begin{array}{rcccl} 6 & + & 3 & = & 9 \\ +1 & \downarrow & \downarrow & -1 & \\ \boxed{7} & + & \boxed{2} & = & \boxed{9} \end{array}$$

$$\begin{array}{rcccl} 8 & + & 3 & = & 11 \\ +1 & \downarrow & \downarrow & -1 & \\ \boxed{9} & + & \boxed{2} & = & \boxed{11} \end{array}$$

$$\begin{array}{rcccl} 9 & + & 6 & = & 15 \\ +1 & \downarrow & \downarrow & -1 & \\ \boxed{10} & + & \boxed{5} & = & \boxed{15} \end{array}$$

$$\begin{array}{rcccl} 5 & + & 2 & = & 7 \\ +1 & \downarrow & \downarrow & -1 & \\ \boxed{6} & + & \boxed{1} & = & \boxed{7} \end{array}$$


$$\begin{array}{rcccl} 7 & + & 11 & = & 18 \\ +1 & \downarrow & \downarrow & -1 & \\ \boxed{8} & + & \boxed{10} & = & \boxed{18} \end{array}$$

















$$\begin{array}{rcccl} 11 & + & 7 & = & 18 \\ +1 & \downarrow & \downarrow & -1 & \\ \boxed{12} & + & \boxed{6} & = & \boxed{18} \end{array}$$

☐ Finish the addition sentence.

$$6 + 11 = 7 + \underline{10}$$

$$8 + 4 = 9 + \underline{3}$$

- ☐ Draw a model.
- ☐ Move the line one dot to the left. 
- ☐ Write the new addition sentence.

 $2 + 4 = 6$  $1 + 5 = 6$	 $2 + 3 = 5$  $1 + 4 = 5$
 $4 + 1 = 5$  $3 + 2 = 5$	 $4 + 2 = 6$  $3 + 3 = 6$
 $2 + 2 = 4$  $1 + 3 = 4$	 $1 + 2 = 3$  $0 + 3 = 3$
 $2 + 1 = 3$  $1 + 2 = 3$	 $4 + 0 = 4$  $3 + 1 = 4$

How does the first number change? It goes down by 1.

How does the second number change? It goes up by 1.

What happens to the total? It stays the same.

☐ Why does that happen? The total stays the same when the numbers being added change in opposite ways.

- ☐ Change both numbers in opposite ways.
- ☐ Complete the two addition sentences.

$$\begin{array}{ccc} 13 & + & 4 \\ -3 \downarrow & & \downarrow +3 \\ 10 & + & 7 \end{array} = 17 = 17$$

$$\begin{array}{ccc} 8 & + & 7 \\ +2 \downarrow & & \downarrow -2 \\ 10 & + & 5 \end{array} = 15 = 15$$

$$\begin{array}{ccc} 7 & + & 8 \\ +3 \downarrow & & \downarrow -3 \\ 10 & + & 5 \end{array} = 15 = 15$$

$$\begin{array}{ccc} 11 & + & 7 \\ -1 \downarrow & & \downarrow +1 \\ 10 & + & 8 \end{array} = 18 = 18$$

$$\begin{array}{ccc} 12 & + & 6 \\ -2 \downarrow & & \downarrow +2 \\ 10 & + & 8 \end{array} = 18 = 18$$

$$\begin{array}{ccc} 5 & + & 13 \\ +3 \downarrow & & \downarrow -3 \\ 8 & + & 10 \end{array} = 18 = 18$$

$$\begin{array}{ccc} 11 & + & 7 \\ -3 \downarrow & & \downarrow +3 \\ 8 & + & 10 \end{array} = 18 = 18$$

$$\begin{array}{ccc} 9 & + & 8 \\ +1 \downarrow & & \downarrow -1 \\ 10 & + & 7 \end{array} = 17 = 17$$

In each question, did the total change? no

Using 10 to Add

☐ Use the group of 10 to help you add.

7 6

$7 + 6 = 10 + \underline{3} = \underline{13}$

8 6

$8 + 6 = 10 + \underline{4} = \underline{14}$

9 7

$9 + 7 = 10 + \underline{6} = \underline{16}$

8 8

$8 + 8 = \underline{6} + 10 = \underline{16}$

7 5

$7 + 5 = 10 + \underline{2} = \underline{12}$

4 8

$4 + 8 = \underline{2} + 10 = \underline{12}$

☐ Sara groups 10 in two ways. Does she get the same answer?

3 9

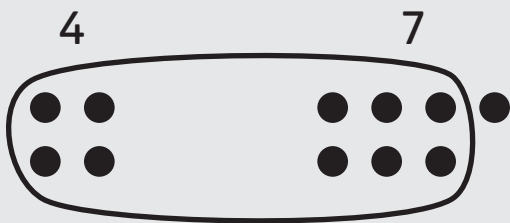
$3 + 9 = 10 + \underline{2} = \underline{12}$

3 9

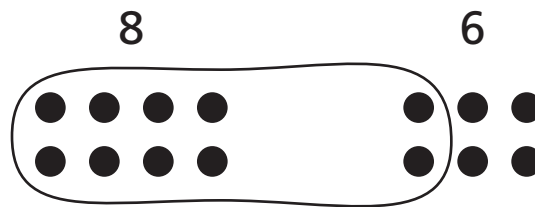
$3 + 9 = \underline{2} + 10 = \underline{12}$

☐ Circle a group of 10.

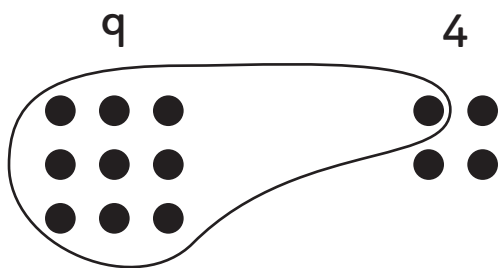
☐ Use 10 to add.



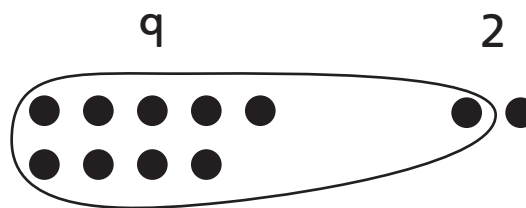
$$4 + 7 = 10 + \underline{1} = \underline{11}$$



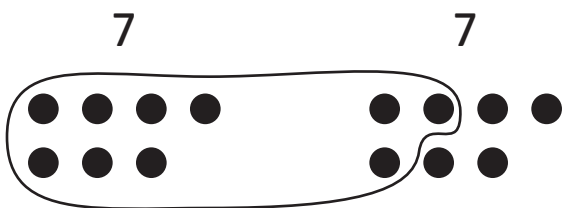
$$8 + 6 = 10 + \underline{4} = \underline{14}$$



$$9 + 4 = 10 + \underline{3} = \underline{13}$$



$$9 + 2 = 10 + \underline{1} = \underline{11}$$



$$7 + 7 = 10 + \underline{4} = \underline{14}$$

Make your own.
Teacher to check.

Using the Nearest 10 to Add

☐ Use 10 to add.



$$8 + 6 = 10 + \underline{4} = \underline{14}$$



$$7 + 5 = 10 + \underline{2} = \underline{12}$$



$$7 + 9 = 10 + \underline{6} = \underline{16}$$

☐ Draw the circles, then add.



$$6 + 5 = 10 + \underline{1} = \underline{11}$$



$$9 + 5 = 10 + \underline{4} = \underline{14}$$

Does using 10 make adding easier? yes

☐ Explain. Teacher to check.

☐ Which two answers are the same? Why did that happen?

- ☐ What makes 10 with the first number?
Subtract that amount from the second number.
- ☐ Complete the addition sentences.

$$\begin{array}{r} 8 + 5 = 13 \\ +2 \quad \downarrow \quad -2 \\ 10 + 3 = 13 \end{array}$$

$$\begin{array}{r} 8 + 7 = 15 \\ +2 \quad \downarrow \quad -2 \\ 10 + 5 = 15 \end{array}$$

$$\begin{array}{r} 9 + 6 = 15 \\ +1 \quad \downarrow \quad -1 \\ 10 + 5 = 15 \end{array}$$

$$\begin{array}{r} 9 + 8 = 17 \\ +1 \quad \downarrow \quad -1 \\ 10 + 7 = 17 \end{array}$$

$$\begin{array}{r} 8 + 9 = 17 \\ +2 \quad \downarrow \quad -2 \\ 10 + 7 = 17 \end{array}$$

$$\begin{array}{r} 9 + 7 = 16 \\ +1 \quad \downarrow \quad -1 \\ 10 + 6 = 16 \end{array}$$

$$9 + 5 = 10 + \underline{4} = \underline{14}$$

$$8 + 4 = 10 + \underline{2} = \underline{12}$$

$$9 + 4 = \underline{10} + \underline{3} = \underline{13}$$

$$8 + 6 = \underline{10} + \underline{4} = \underline{14}$$

- ☐ Add 1 to one of the numbers.
- ☐ Subtract 1 from the other number.
- ☐ Complete the new addition sentence.

$$\begin{array}{r} 32 + 9 \\ = \underline{31} + \underline{10} = \underline{41} \end{array}$$

$$\begin{array}{r} 19 + 8 \\ = \underline{20} + \underline{7} = \underline{27} \end{array}$$

$$\begin{array}{r} 7 + 29 \\ = \underline{6} + \underline{30} = \underline{36} \end{array}$$

$$\begin{array}{r} 27 + 19 \\ = \underline{26} + \underline{20} = \underline{46} \end{array}$$

$$\begin{array}{r} 19 + 16 \\ = \underline{20} + \underline{15} = \underline{35} \end{array}$$

$$\begin{array}{r} 29 + 6 \\ = \underline{30} + \underline{5} = \underline{35} \end{array}$$

$$\begin{array}{r} 18 + 9 \\ = \underline{17} + \underline{10} = \underline{27} \end{array}$$

$$\begin{array}{r} 9 + 36 \\ = \underline{10} + \underline{35} = \underline{45} \end{array}$$

$$\begin{array}{r} 9 + 47 \\ = \underline{10} + \underline{46} = \underline{56} \end{array}$$

$$\begin{array}{r} 38 + 19 \\ = \underline{37} + \underline{20} = \underline{57} \end{array}$$

- ☐ Sam has to solve $27 + 29$. He says $26 + 30$ has the same answer. Explain why he is correct. Teacher to check.
- ☐ Which problem is easier, $27 + 29$ or $26 + 30$? Explain.

- ☐ Make a new addition problem by adding and subtracting 2.
- ☐ Solve the new addition problem.

$$18 + 15$$

$$= \underline{20} + \underline{13} = \underline{33}$$

$$14 + 28$$

$$= \underline{12} + \underline{30} = \underline{42}$$

$$37 + 48$$

$$= \underline{35} + \underline{50} = \underline{85}$$

$$68 + 24$$

$$= \underline{70} + \underline{22} = \underline{92}$$

$$42 + 54$$

$$= \underline{40} + \underline{56} = \underline{96}$$

$$72 + 17$$

$$= \underline{70} + \underline{19} = \underline{89}$$

$$56 + 32$$

$$= \underline{58} + \underline{30} = \underline{88}$$

$$28 + 45$$

$$= \underline{30} + \underline{43} = \underline{73}$$

$$22 + 35$$

$$= \underline{20} + \underline{37} = \underline{57}$$


$$43 + 48$$

$$= \underline{41} + \underline{50} = \underline{91}$$

Using Tens and Ones to Add

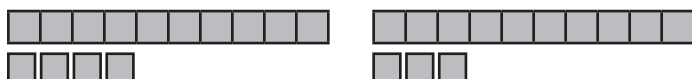
How many tens and ones altogether?

☐ Add.



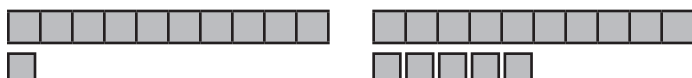
2 tens + 5 ones

$$13 + 12 = \underline{25}$$



2 tens + 7 ones

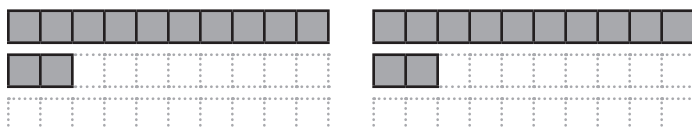
$$14 + 13 = \underline{27}$$



2 tens + 6 ones

$$11 + 15 = \underline{26}$$

☐ Now draw the blocks and add.



2 tens + 4 ones

$$12 + 12 = \underline{24}$$

☐ Make your own problem. Teacher to check.



_____ tens + _____ ones

$$\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

☐ Add by separating the tens and ones.

$$\begin{array}{r} 23 \\ + 34 \\ \hline \end{array} = \begin{array}{r} 20 + 3 \\ 30 + 4 \\ \hline \end{array}$$

$$\boxed{57} \leftarrow 50 + 7$$

$$\begin{array}{r} 34 \\ + 15 \\ \hline \end{array} = \begin{array}{r} 30 + 4 \\ 10 + 5 \\ \hline \end{array}$$

$$\boxed{49} \leftarrow 40 + 9$$

$$\begin{array}{r} 27 \\ + 22 \\ \hline \end{array} = \begin{array}{r} 20 + \boxed{7} \\ 20 + \boxed{2} \\ \hline \end{array}$$

$$\boxed{49} \leftarrow 40 + \boxed{9}$$

$$\begin{array}{r} 35 \\ + 42 \\ \hline \end{array} = \begin{array}{r} \boxed{30} + \boxed{5} \\ \boxed{40} + \boxed{2} \\ \hline \end{array}$$

$$\boxed{77} \leftarrow \boxed{70} + \boxed{7}$$

$$\begin{array}{r} 15 \\ + 23 \\ \hline \end{array} = \begin{array}{r} \boxed{10} + \boxed{5} \\ \boxed{20} + \boxed{3} \\ \hline \end{array}$$

$$\boxed{38} \leftarrow \boxed{30} + \boxed{8}$$

$$\begin{array}{r} 26 \\ + 13 \\ \hline \end{array} = \begin{array}{r} \boxed{20} + \boxed{6} \\ \boxed{10} + \boxed{3} \\ \hline \end{array}$$

$$\boxed{39} \leftarrow \boxed{30} + \boxed{9}$$

$$\begin{array}{r} 34 \\ + 54 \\ \hline \end{array} = \begin{array}{r} \boxed{30} + \boxed{4} \\ \boxed{50} + \boxed{4} \\ \hline \end{array}$$

$$\boxed{88} \leftarrow \boxed{80} + \boxed{8}$$

$$\begin{array}{r} 26 \\ + 33 \\ \hline \end{array} = \begin{array}{r} \boxed{20} + \boxed{6} \\ \boxed{30} + \boxed{3} \\ \hline \end{array}$$

$$\boxed{59} \leftarrow \boxed{50} + \boxed{9}$$

$$\begin{array}{r} 22 \\ 14 \\ + 21 \\ \hline \end{array} = \begin{array}{r} \boxed{20} + \boxed{2} \\ \boxed{10} + \boxed{4} \\ \boxed{20} + \boxed{1} \\ \hline \end{array}$$

$$\boxed{57} \leftarrow \boxed{50} + \boxed{7}$$

$$\begin{array}{r} 11 \\ 22 \\ + 33 \\ \hline \end{array} = \begin{array}{r} \boxed{10} + \boxed{1} \\ \boxed{20} + \boxed{2} \\ \boxed{30} + \boxed{3} \\ \hline \end{array}$$

$$\boxed{66} \leftarrow \boxed{60} + \boxed{6}$$

☐ Add by using a tens and ones chart.

35	
+ 32	
<u>67</u>	

tens	ones
3	5
3	2
6	7

24	
+ 41	
<u>65</u>	

tens	ones
2	4
4	1
6	5

46	
+ 31	
<u>77</u>	

tens	ones
4	6
3	1
7	7

43	
+ 23	
<u>66</u>	

tens	ones
4	3
2	3
6	6

27	
+ 21	
+ 51	
<u>qq</u>	

tens	ones
2	7
2	1
5	1
q	q

31	
+ 42	
+ 14	
<u>87</u>	


tens	ones
3	1
4	2
1	4
8	7

	tens	ones
	3	2
+	2	7
	5	q

	tens	ones
	4	8
+	3	1
	7	q

	tens	ones
	5	5
+	2	3
	7	8

	tens	ones
	2	2
+	1	3
	3	5

	37	63	25	31	54	23
	+ 22	+ 16	+ 34	+ 62	+ 34	+ 43
	<u>59</u>	<u>79</u>	<u>59</u>	<u>q3</u>	<u>88</u>	<u>66</u>

Many Ways to Write a Number

☐ Write 53 in many ways.

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

5 tens + 3 ones

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

4 tens + 13 ones

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

3 tens + 23 ones

☐ Write the number in many ways.

24

tens	ones
2	4
1	14
0	24

27

tens	ones
2	7
1	17
0	27

26

tens	ones
2	6
1	16
0	26

37

tens	ones
3	7
2	17
1	27
0	37

38

tens	ones
3	8
2	18
1	28
0	38

31

tens	ones
3	1
2	11
1	21
0	31

50

tens	ones
5	0
4	10
3	20
2	30
1	40
0	50

56

tens	ones
5	6
4	16
3	26
2	36
1	46
0	56

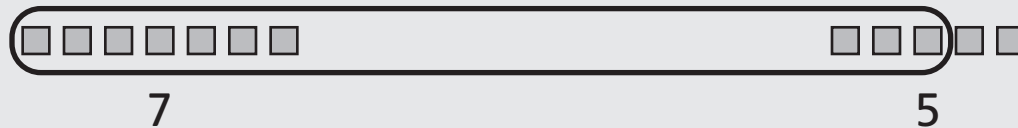
52

tens	ones
5	2
4	12
3	22
2	32
1	42
0	52

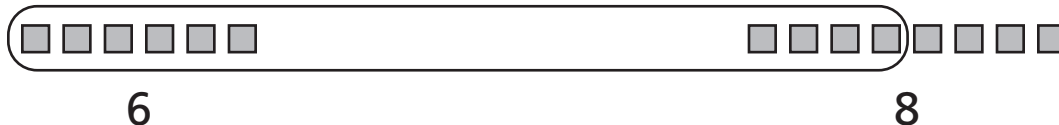
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Regrouping

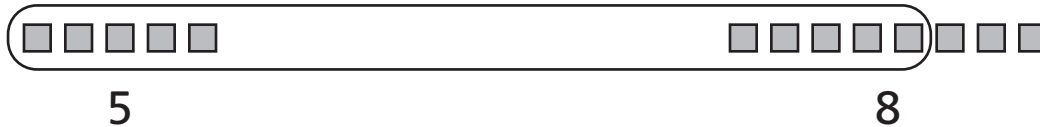
- ☐ Group 10 ones blocks together.
- ☐ Add.



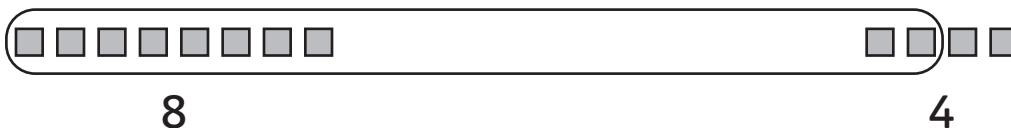
$$7 + 5 = 10 + \underline{2} = \underline{12}$$



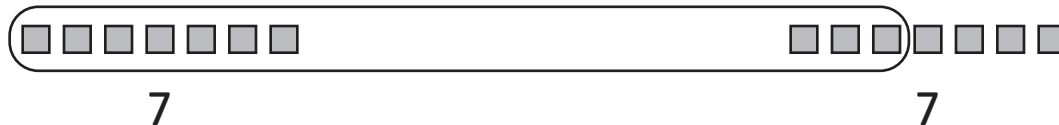
$$6 + 8 = 10 + \underline{4} = \underline{14}$$



$$5 + 8 = 10 + \underline{3} = \underline{13}$$



$$8 + 4 = 10 + \underline{2} = \underline{12}$$

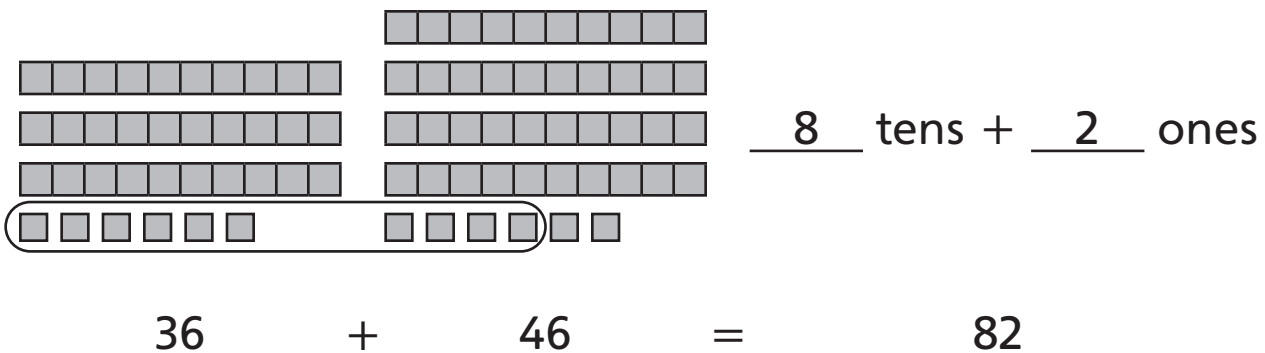
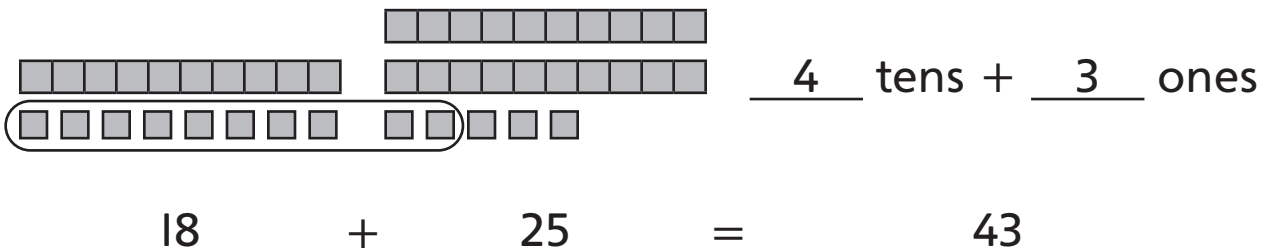
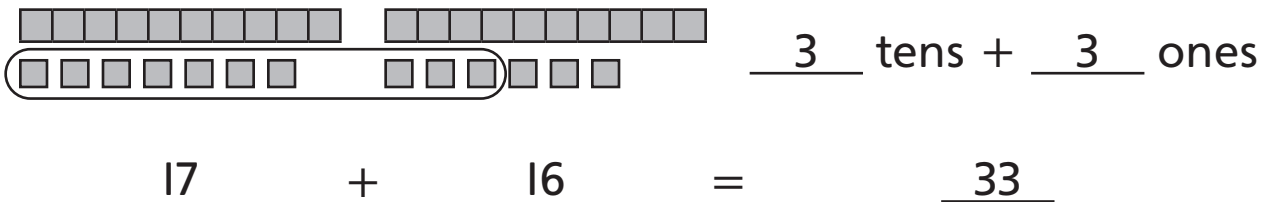
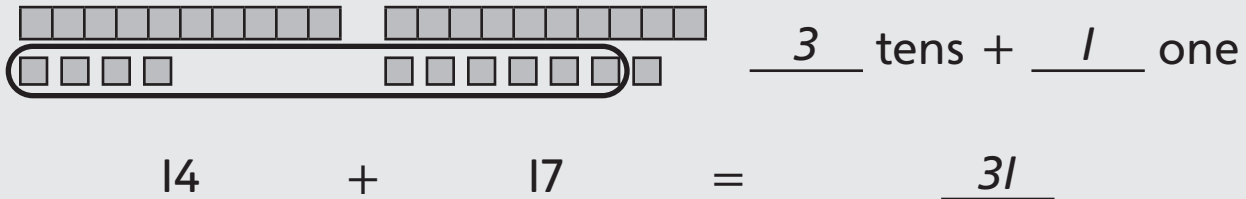


$$7 + 7 = 10 + \underline{4} = \underline{14}$$

☐ Group 10 ones blocks together.

How many tens and ones?

☐ Add.

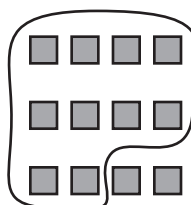


- ☐ Trade groups of 10 ones for tens.
- ☐ Regroup in the next row.

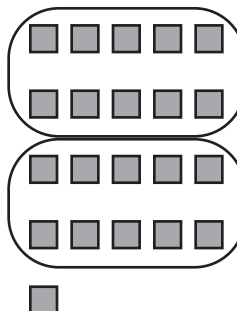
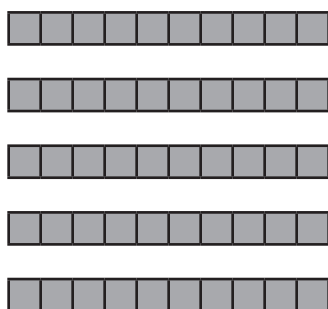
tens	ones
4	27
6	7



tens	ones
3	12
4	2



tens	ones
5	21
7	1



tens	ones
3	15
4	5

tens	ones
6	19
7	9

tens	ones
4	28
6	8

- ☐ Add the tens and ones.
- ☐ Regroup in the next row.
- ☐ Write the answer.

tens	ones
1	6
5	5
6	11
7	1

$$\begin{array}{r} 16 \\ + 55 \\ \hline 71 \end{array}$$

tens	ones
1	2
2	9
3	11
4	1

$$\begin{array}{r} 12 \\ + 29 \\ \hline 41 \end{array}$$

tens	ones
2	5
3	8
5	13
6	3

$$\begin{array}{r} 25 \\ + 38 \\ \hline 63 \end{array}$$

tens	ones
5	7
2	6
7	13
8	3

$$\begin{array}{r} 57 \\ + 26 \\ \hline 83 \end{array}$$

tens	ones
2	8
2	6
4	14
5	4

$$\begin{array}{r} 28 \\ + 26 \\ \hline 54 \end{array}$$

tens	ones
2	3
5	2
1	6
8	11
9	1

$$\begin{array}{r} 23 \\ 52 \\ + 16 \\ \hline 91 \end{array}$$

The Standard Algorithm for Addition

- ☐ Add the ones.
- ☐ Write the tens digit in the tens column.
- ☐ Write the ones digit in the ones column.

$$5 + 9 = \boxed{1} \boxed{4}$$

	tens	ones
	<div style="border: 1px solid black; padding: 2px 10px;">/</div>	
	1	5
+	2	9
	<div style="background-color: #cccccc; border: 1px solid black; padding: 2px 10px;"></div>	<div style="border: 1px solid black; padding: 2px 10px;">4</div>

$$3 + 8 = \boxed{1} \boxed{1}$$

	tens	ones
	<div style="border: 1px solid black; padding: 2px 10px;">1</div>	
	2	3
+	3	8
	<div style="background-color: #cccccc; border: 1px solid black; padding: 2px 10px;"></div>	<div style="border: 1px solid black; padding: 2px 10px;">1</div>

$$6 + 4 = \boxed{1} \boxed{0}$$

	tens	ones
	<div style="border: 1px solid black; padding: 2px 10px;">1</div>	
	5	6
+	3	4
	<div style="background-color: #cccccc; border: 1px solid black; padding: 2px 10px;"></div>	<div style="border: 1px solid black; padding: 2px 10px;">0</div>

$$7 + 5 = \boxed{1} \boxed{2}$$

	tens	ones
	<div style="border: 1px solid black; padding: 2px 10px;">1</div>	
	3	7
+	2	5
	<div style="background-color: #cccccc; border: 1px solid black; padding: 2px 10px;"></div>	<div style="border: 1px solid black; padding: 2px 10px;">2</div>

$$6 + 9 = \boxed{1} \boxed{5}$$

	tens	ones
	<div style="border: 1px solid black; padding: 2px 10px;">1</div>	
	1	6
+	4	9
	<div style="background-color: #cccccc; border: 1px solid black; padding: 2px 10px;"></div>	<div style="border: 1px solid black; padding: 2px 10px;">5</div>

$$7 + 8 = \boxed{1} \boxed{5}$$

	tens	ones
	<div style="border: 1px solid black; padding: 2px 10px;">1</div>	
	2	7
+	3	8
	<div style="background-color: #cccccc; border: 1px solid black; padding: 2px 10px;"></div>	<div style="border: 1px solid black; padding: 2px 10px;">5</div>

	tens	ones
	<div style="border: 1px solid black; padding: 2px 10px;">1</div>	
	1	4
+	3	8
	<div style="background-color: #cccccc; border: 1px solid black; padding: 2px 10px;"></div>	<div style="border: 1px solid black; padding: 2px 10px;">2</div>

	tens	ones
	<div style="border: 1px solid black; padding: 2px 10px;">1</div>	
	4	7
+	2	3
	<div style="background-color: #cccccc; border: 1px solid black; padding: 2px 10px;"></div>	<div style="border: 1px solid black; padding: 2px 10px;">0</div>

	tens	ones
	<div style="border: 1px solid black; padding: 2px 10px;">1</div>	
	1	5
+	3	5
	<div style="background-color: #cccccc; border: 1px solid black; padding: 2px 10px;"></div>	<div style="border: 1px solid black; padding: 2px 10px;">0</div>

- ☐ Add the ones first.
- ☐ Then add the tens to find the total.

$$\begin{array}{r} \boxed{1} \\ 1 \quad 5 \\ + 2 \quad 9 \\ \hline \boxed{4} \quad \boxed{4} \end{array}$$

$$\begin{array}{r} \boxed{1} \\ 2 \quad 3 \\ + 3 \quad 8 \\ \hline \boxed{6} \quad \boxed{1} \end{array}$$

$$\begin{array}{r} \boxed{1} \\ 5 \quad 6 \\ + 3 \quad 4 \\ \hline \boxed{9} \quad \boxed{0} \end{array}$$

$$\begin{array}{r} \boxed{1} \\ 2 \quad 9 \\ + 1 \quad 1 \\ \hline \boxed{4} \quad \boxed{0} \end{array}$$

$$\begin{array}{r} \boxed{1} \\ 3 \quad 7 \\ + 2 \quad 5 \\ \hline \boxed{6} \quad \boxed{2} \end{array}$$

$$\begin{array}{r} \boxed{1} \\ 1 \quad 6 \\ + 4 \quad 9 \\ \hline \boxed{6} \quad \boxed{5} \end{array}$$

$$\begin{array}{r} \boxed{1} \\ 2 \quad 7 \\ + 3 \quad 8 \\ \hline \boxed{6} \quad \boxed{5} \end{array}$$

$$\begin{array}{r} \boxed{1} \\ 1 \quad 5 \\ + 1 \quad 9 \\ \hline \boxed{3} \quad \boxed{4} \end{array}$$

$$\begin{array}{r} \boxed{1} \\ 1 \quad 4 \\ + 3 \quad 8 \\ \hline \boxed{5} \quad \boxed{2} \end{array}$$

$$\begin{array}{r} \boxed{1} \\ 4 \quad 7 \\ + 2 \quad 3 \\ \hline \boxed{7} \quad \boxed{0} \end{array}$$

$$\begin{array}{r} \boxed{1} \\ 1 \quad 5 \\ + 3 \quad 5 \\ \hline \boxed{5} \quad \boxed{0} \end{array}$$

$$\begin{array}{r} \boxed{1} \\ 2 \quad 8 \\ + 3 \quad 8 \\ \hline \boxed{6} \quad \boxed{6} \end{array}$$

☐ Add. Regroup when you need to.

$\begin{array}{r} \boxed{1} \\ 1 \ 9 \\ + 2 \ 6 \\ \hline \boxed{4} \ \boxed{5} \end{array}$	$\begin{array}{r} \boxed{} \\ 2 \ 5 \\ + 3 \ 3 \\ \hline \boxed{5} \ \boxed{8} \end{array}$	$\begin{array}{r} \boxed{1} \\ 3 \ 7 \\ + 2 \ 5 \\ \hline \boxed{6} \ \boxed{2} \end{array}$	$\begin{array}{r} \boxed{} \\ 2 \ 3 \\ + 4 \ 6 \\ \hline \boxed{6} \ \boxed{9} \end{array}$
$\begin{array}{r} \boxed{1} \\ 2 \ 9 \\ + \ 4 \\ \hline \boxed{3} \ \boxed{3} \end{array}$	$\begin{array}{r} \boxed{} \\ 1 \ 3 \\ + 2 \ 2 \\ \hline \boxed{3} \ \boxed{5} \end{array}$	$\begin{array}{r} \boxed{1} \\ 4 \ 7 \\ + \ 3 \\ \hline \boxed{5} \ \boxed{0} \end{array}$	$\begin{array}{r} \boxed{} \\ 8 \ 6 \\ + \ 1 \\ \hline \boxed{8} \ \boxed{7} \end{array}$

Liz added the tens before the ones.

☐ Circle the answers she got wrong.

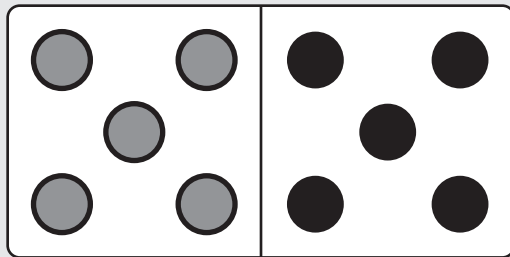
$\begin{array}{r} \boxed{} \\ 1 \ 1 \\ + 5 \ 8 \\ \hline \boxed{6} \ \boxed{9} \end{array}$	$\begin{array}{r} \boxed{1} \\ 1 \ 7 \\ + 2 \ 7 \\ \hline \boxed{3} \ \boxed{4} \end{array}$	$\begin{array}{r} \boxed{1} \\ 2 \ 6 \\ + 2 \ 6 \\ \hline \boxed{4} \ \boxed{2} \end{array}$	$\begin{array}{r} \boxed{} \\ 4 \ 3 \\ + 2 \ 5 \\ \hline \boxed{6} \ \boxed{8} \end{array}$
--	--	--	--

☒ Add.

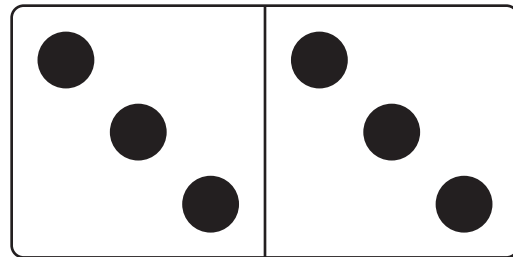
$29 + 14 = 43$
 $37 + 46 = 83$
 $48 + 23 = 71$
 $55 + 39 = 94$

Doubles

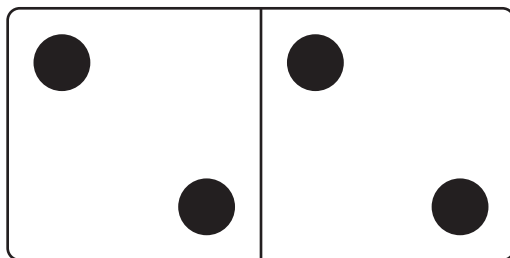
- ☐ Draw the same number of dots on the other side.
- ☐ Write a doubles sentence.



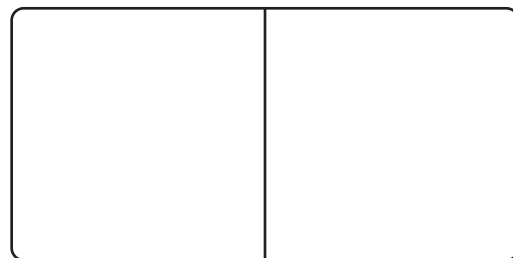
10 is double 5



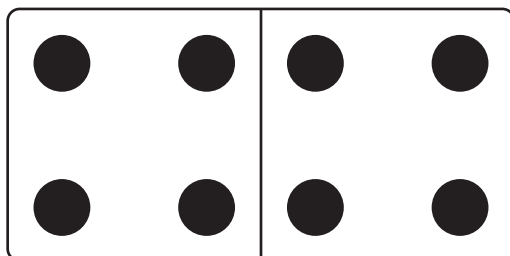
6 is double 3



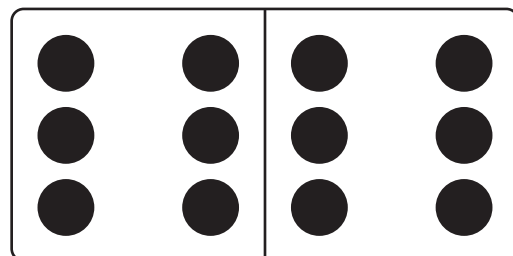
4 is double 2



0 is double 0

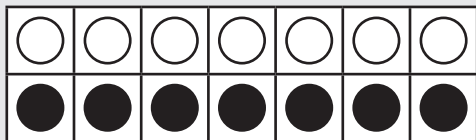


8 is double 4

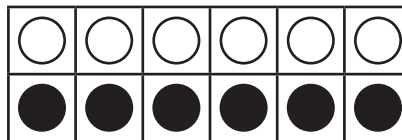


12 is double 6

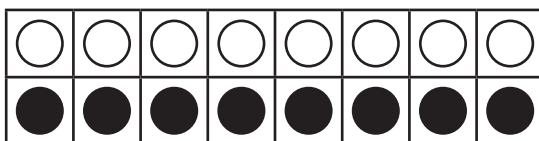
☐ Write an addition sentence for the double.



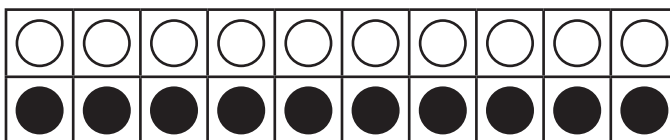
$$\underline{7} + \underline{7} = \underline{14}$$



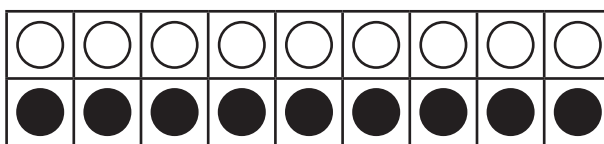
$$\underline{6} + \underline{6} = \underline{12}$$



$$\underline{8} + \underline{8} = \underline{16}$$



$$\underline{10} + \underline{10} = \underline{20}$$



$$\underline{9} + \underline{9} = \underline{18}$$

$$\underline{1} + \underline{1} = \underline{2}$$

$$\underline{4} + \underline{4} = \underline{8}$$

Using Doubles to Add

☐ Double, then add 1.

$$4 + 4 = \underline{8}$$
$$\text{so } 4 + 5 = \underline{9}$$

$$3 + 3 = \underline{6}$$
$$\text{so } 4 + 3 = \underline{7}$$

$$7 + 7 = \underline{14}$$
$$\text{so } 8 + 7 = \underline{15}$$

$$8 + 8 = \underline{16}$$
$$\text{so } 8 + 9 = \underline{17}$$

$$6 + 6 = \underline{12}$$
$$\text{so } 6 + 7 = \underline{13}$$

$$5 + 5 = \underline{10}$$
$$\text{so } 6 + 5 = \underline{11}$$

$$\underline{7} + \underline{7} = \underline{14}$$
$$\text{so } \quad \quad 7 + 8 = \underline{15}$$

$$\underline{4} + \underline{4} = \underline{8}$$
$$\text{so } \quad \quad 5 + 4 = \underline{9}$$

$$\underline{5} + \underline{5} = \underline{10}$$
$$\text{so } \quad \quad 5 + 6 = \underline{11}$$

$$\underline{9} + \underline{9} = \underline{18}$$
$$\text{so } \quad \quad 10 + 9 = \underline{19}$$

Bonus

☐ Find $30 + 31$. $30 + 30 = 60$, so $30 + 31 = 61$

☐ Double, then subtract 1.

$$7 + 7 = \underline{14}$$
$$\text{so } 7 + 6 = \underline{13}$$

$$9 + 9 = \underline{18}$$
$$\text{so } 8 + 9 = \underline{17}$$

$$6 + 6 = \underline{12}$$
$$\text{so } 6 + 5 = \underline{11}$$

$$8 + 8 = \underline{16}$$
$$\text{so } 7 + 8 = \underline{15}$$

$$8 + 8 = \underline{16}$$
$$\text{so } 8 + 7 = \underline{15}$$

$$5 + 5 = \underline{10}$$
$$\text{so } 4 + 5 = \underline{9}$$

$$\underline{10} + \underline{10} = \underline{20}$$
$$\text{so } \quad \quad 9 + 10 = \underline{19}$$

$$\underline{9} + \underline{9} = \underline{18}$$
$$\text{so } \quad \quad 9 + 8 = \underline{17}$$

$$\underline{4} + \underline{4} = \underline{8}$$
$$\text{so } \quad \quad 3 + 4 = \underline{7}$$

$$\underline{8} + \underline{8} = \underline{16}$$
$$\text{so } \quad \quad 7 + 8 = \underline{15}$$

Bonus

 Find $40 + 39$. $40 + 40 = 80$, so $40 + 39 = 79$

- ☐ Write how many **more** or **less**.
- ☐ Find the double.
- ☐ Add.

$$4 + 5 \text{ is } \underline{\hspace{2cm}} \text{ I more than } \underline{\hspace{2cm}} 4 + 4$$

$$4 + 4 = \underline{8} \quad \text{so} \quad 4 + 5 = \underline{9}$$

$$8 + 9 \text{ is } \underline{\hspace{2cm}} \text{ I less than } \underline{\hspace{2cm}} 9 + 9$$

$$9 + 9 = \underline{18} \quad \text{so} \quad 8 + 9 = \underline{17}$$

$$8 + 7 \text{ is } \underline{\hspace{2cm}} \text{ I less than } \underline{\hspace{2cm}} 8 + 8$$

$$8 + 8 = \underline{16} \quad \text{so} \quad 8 + 7 = \underline{15}$$

$$6 + 7 \text{ is } \underline{\hspace{2cm}} \text{ I more than } \underline{\hspace{2cm}} 6 + 6$$

$$6 + 6 = \underline{12} \quad \text{so} \quad 6 + 7 = \underline{13}$$

$$9 + 10 \text{ is } \underline{\hspace{2cm}} \text{ I less than } \underline{\hspace{2cm}} 10 + 10$$

$$10 + 10 = \underline{20} \quad \text{so} \quad 9 + 10 = \underline{19}$$

$$7 + 6 \text{ is } \underline{\hspace{2cm}} \text{ I more than } \underline{\hspace{2cm}} 6 + 6$$

$$\underline{\hspace{2cm}} 6 + 6 = 12 \quad \text{so} \quad 7 + 6 = \underline{13}$$

- ☒ Which two questions have the same answer? $6 + 7$ and $7 + 6$
Why did that happen? The same numbers are being added, in a different order.