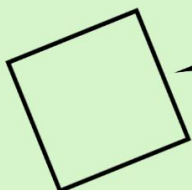


I SEE REASONING YEAR 1

Tasks to inspire mathematical thinking

True or False?



← This is a square

I know... so...

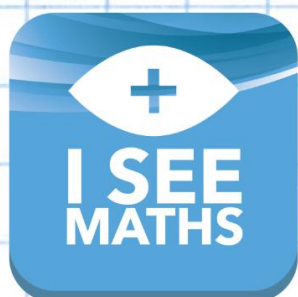
$$4 + 4 =$$

$$5 + 3 =$$

$$15 + 3 =$$

Finish the sentence:

A balloon is bigger
and lighter than...



BY GARETH METCALFE

Available for digital download

Read the Pictures

The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...
The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...
The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...
The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...
The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...

Read the Pictures

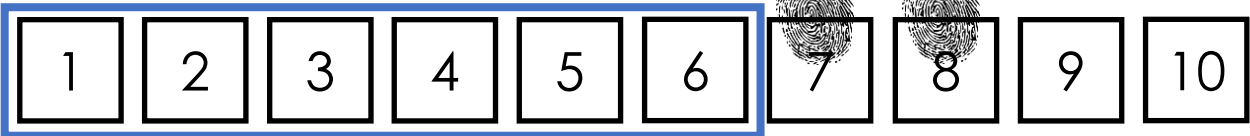
The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...
The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...
The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...
The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...
The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...
The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...
The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...	The whole is... The parts are... and...

Read the Picture

$$6 + 2$$



7, 8



Spot the Mistake

$$5 + 3$$



5, 6, 7



Which Answer?

$$4 + 3$$

5, 6, 7



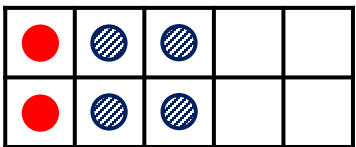
$$4 + 3$$

4, 5, 6



Correct or Not Correct? ✓ or ✕

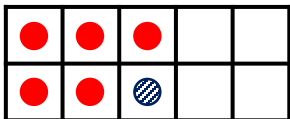
$$2 + 4 = 6$$



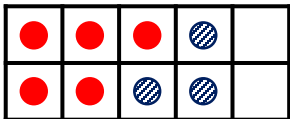
$$6 = 2 + 4$$

$$4 = 2 + 6$$

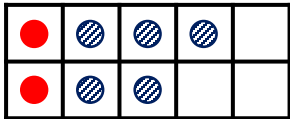
Read the Pictures



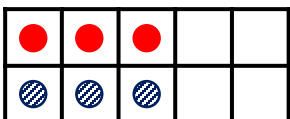
$$\square + \square = 6$$



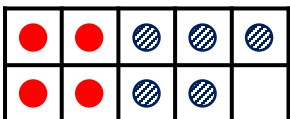
$$\square + \square = 8$$



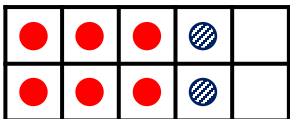
$$\square + \square = 7$$



$$6 = \square + \square$$

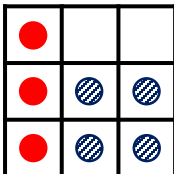


$$9 = \square + \square$$

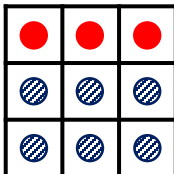


$$\square = \square + \square$$

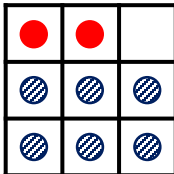
Read the Pictures



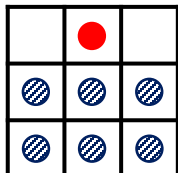
$$\square + \square = 7$$



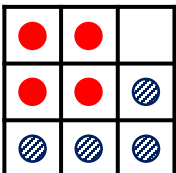
$$\square + \square = 9$$



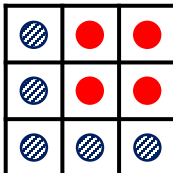
$$\square + \square = 8$$



$$7 = \square + \square$$

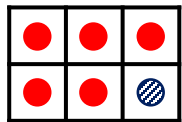


$$8 = \square + \square$$



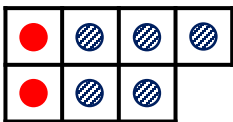
$$\square = \square + \square$$

Read the Pictures



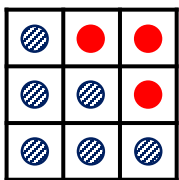
$$\square = 5 + \square$$

The whole is...



$$\square = 2 + \square$$

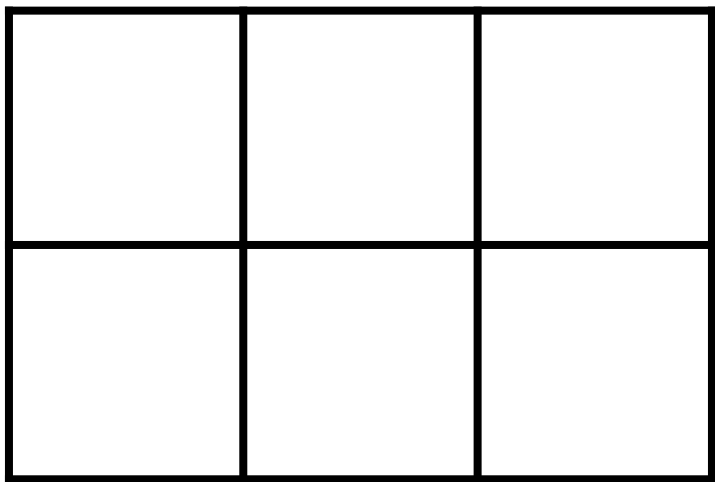
The parts are... and...



$$\square + \square = \square$$

Explore

Show the answers with counters:



$$6 = 4 + \square$$

$$6 = \square + 5$$

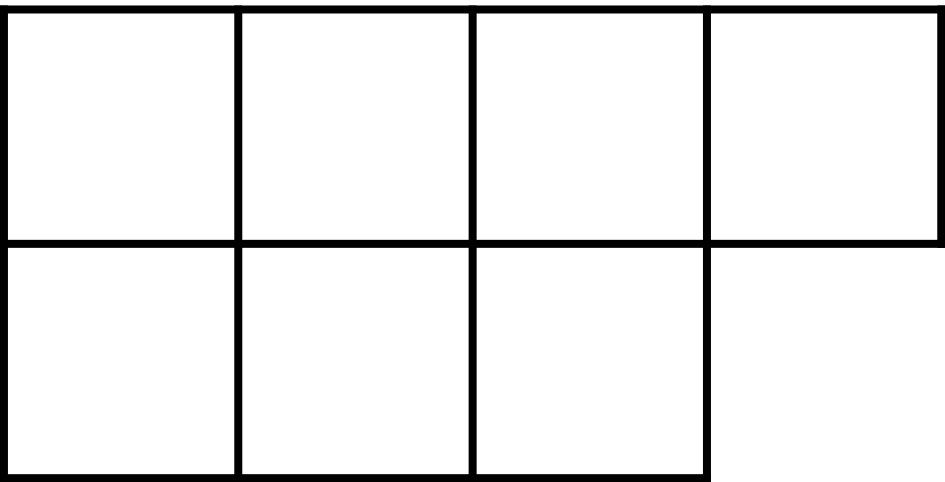
$$6 = \square + 3$$

$$6 = 2 + \square$$

$$6 = \square + 0$$

Explore

Show the answers with counters:



$$7 = 3 + \square$$

$$7 = \square + 5$$

$$7 = 1 + \square$$

$$7 = 0 + \square$$

$$7 = \square + \square$$

Explore

Show the answers with counters:

The whole is... The parts are... and...

$$\begin{aligned}
 8 &= 3 + \square \\
 8 &= \square + 2 \\
 8 &= \square + 6 \\
 8 &= 4 + \square \\
 8 &= \square + 1 \\
 8 &= 5 + \square \\
 8 &= 0 + \square
 \end{aligned}$$

Explore

Show the answers with counters:

The whole is... The parts are... and...

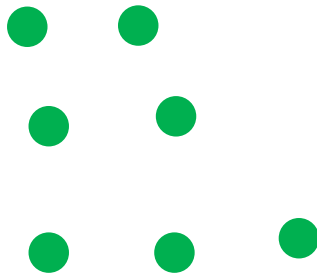
$$\begin{aligned}
 9 &= \square + 4 \\
 9 &= \square + 3 \\
 9 &= 2 + \square \\
 9 &= 8 + \square \\
 9 &= \square + 5 \\
 9 &= 1 + \square \\
 9 &= 9 + \square
 \end{aligned}$$

Read the Picture

What do you see?

6 and 1

4 and 3

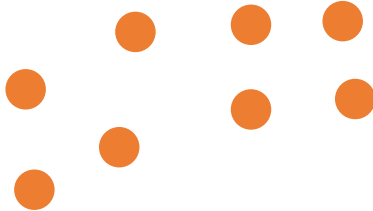


3 and 3
and 1

Read the Picture

What do you see?

4 + 4



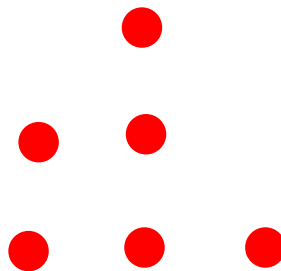
5 + 3

3 + 1 + 4

Read the Picture

What do you see?

+

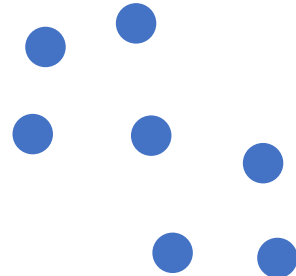


+ +

Read the Picture

What do you see?

+



+ +

Read the Pictures

$4 + 3 = 7$

Read the Pictures

$3 + 2 + 3 = 8$

Different Ways

Show the parts. Write the number sentence.

Example:

$3 + 4 = 7$

$2 + 5 = 7$

$2 + 2 + 3 = 7$

Different Ways

Show the parts. Write the number sentence.

Example:

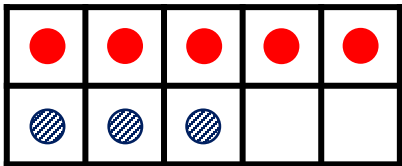
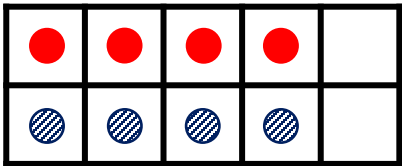
$4 + 4 = 8$

$6 + 2 = 8$

$3 + 3 + 2 = 8$

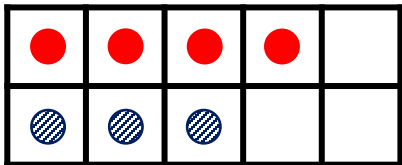
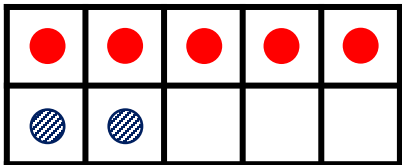
Explain

What's the same? What's different?



$$\square + \square = \square$$

$$\square + \square = \square$$

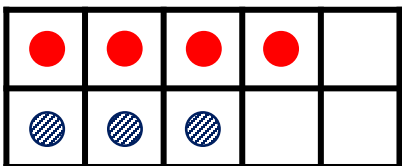
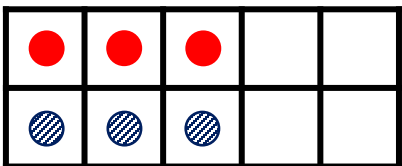


$$\square + \square = \square$$

$$\square + \square = \square$$

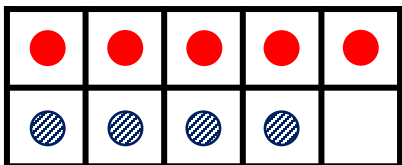
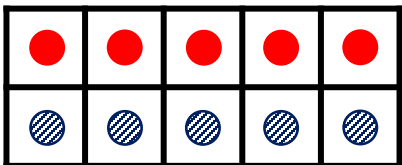
Explain

What's the same? What's different?



$$\square + \square = \square$$

$$\square + \square = \square$$



$$\square + \square = \square$$

$$\square + \square = \square$$

I know... so...

●	●	●		
●	●	●		

$3 + 3 = 6$
so $4 + 3 = \square$

●	●	●	●	
●	●	●	●	

$4 + 4 = 8$
so $5 + 4 = \square$

●	●	●	●	●
●	●	●	●	●

$5 + 5 = 10$
so $5 + 6 = \square$

●	●	●		
●	●	●		

$3 + 3 = 6$
so $4 + 2 = \square$

●	●	●	●	
●	●	●	●	

$4 + 4 = 8$
so $3 + 4 = \square$

●	●	●	●	●
●	●	●	●	●

$5 + 5 = 10$
so $5 + \square = 8$

I know... so...

$3 + 3 = 6$
so $2 + 3 = \square$

$4 + 4 = 8$
so $3 + \square = 8$

$5 + 5 = 10$
so $6 + 4 = \square$

$4 + 4 = 8$
so $4 + 3 = \square$

$5 + 5 = 10$
so $\square + 6 = 10$

$5 + 5 = 10$
so $5 + 3 = \square$

Small Difference Questions

$5 + 5 =$

$4 + 4 =$

$5 + 5 =$

$5 + 4 =$

$5 + 3 =$

$6 + 4 =$

$4 + 5 =$

$4 + 3 =$

$6 + 3 =$

Multi-Step

Fill the gaps. Use each digit:

$$\square + \square = 7$$

$$\square + \square = 9$$

3 5
2 6

Fill the gaps. Use each digit:

$$\square + \square = 8$$

$$\square + \square = 9$$

2 4
5 6

Different Ways

Fill the gaps. Use each digit:

$$\square + \square = 6$$

$$\square + \square = 7$$

$$\square + \square = 8$$

1 2 3
4 5 6

Extend: Another way:

$$\square + \square = 6$$

$$\square + \square = 7$$

$$\square + \square = 8$$

$$\square + \square = 6$$

$$\square + \square = 7$$

$$\square + \square = 8$$

1	4
2	5
3	6

Explain

Fill the gaps. Use two of these digits:

- 2
- 3
- 4
- 5

$$\square + \square = 8$$

Only one answer

Different answers

Multi-Step

Fill the gaps. Use each digit:

$$\square + \square = 6$$

$$\square + \square = 8$$

$$\square + \square = 10$$

- 1
- 2
- 3
- 5
- 6
- 7

Extend: Is there a different answer?

$$\square + \square = 6$$

$$\square + \square = 8$$

$$\square + \square = 10$$

1	5
2	6
3	7

Explain

Fill the gaps. Use three of these digits: 8 5 2 3

$$\square + \square = \square$$

There are two answers

There are more than two answers

Extend

Fill the gaps. Use each digit: 2 3 4 5 6 8

$$\square + \square = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

2	3	4	5	6	8
---	---	---	---	---	---

Explain the Mistake

Fill the gaps. Use three of these digits: 3 4 7

$$\square = \square + \square$$

Incorrect answer: ✗

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

Extend

Fill the gaps. Use each digit: 1 2 3 5 6 7

$$\square + \square = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

1	2	3	5	6	7
---	---	---	---	---	---

Finish the Pictures

Symbols:
 $<$ $=$ $>$

Words:
 less
 more
 equal

less

 6

more

 $5 + 3$

$3 + 1$

less

Which Answer?

Use $<$ $=$ $>$

$2 + 3$ 4

$2 + 3$ $>$ 4
 5 is more than 4

$2 + 3$ $<$ 4
 4 is more than 3

Small Difference Questions

Use $<$ $=$ $>$

$3 + 1$ 5

6 4

$5 + 1$ 6

$3 + 2$ 5

6 $=$ $4 + 2$

$5 + 1$ 5

$2 + 3$ 5

7 $4 + 2$

$5 - 1$ 5

Small Difference Questions

Fill the gaps.
 Use three of the digits: 2 3
 = + 4 6

Fill the gaps.
 Use three of the digits: 2 3
 > + 4 6

Different Ways

$9 > \square + 5$

 What could this number be?

$\square > 5 + 3$

 What could this number be?

Which question has more answers?

Explain

Answer each question. **Which question has more answers?**

$6 > 2 + \square$

$6 = 2 + \square$

$6 < 2 + \square$

I SEE REASONING – Y1

Answers and Guidance

Selected Questions

Addition Within 10, page 9, 10 and 11:

All questions: Draw out the different ways that children visualised answering the questions, including whether they partitioned the quantities into two or three different numbers.

Addition Within 10, page 12:

All questions: Model practically using two-colour counters in 10-frames.

Addition Within 10, page 13:

I know... so... Model with 10-frames and counters if required.

I know... so... Model with 10-frames and counters if required.

Small Difference Questions: Model practically using two-colour counters in 10-frames. Draw out related facts (e.g. $5+4$ is one less than $5+5$) and questions with the same answer (e.g. $5+5 = 6+4$).

Addition Within 10, page 14:

Multi-Step: Left: $5 + 2 = 7$ $6 + 3 = 9$ Right: $6 + 2 = 8$ $5 + 4 = 9$

Different Ways: Method one: $5 + 1 = 6$ $4 + 3 = 7$ $6 + 2 = 8$

Method two: $4 + 2 = 6$ $6 + 1 = 7$ $5 + 3 = 8$

Small Difference Questions: Model practically

Addition Within 10, page 15:

Explain: $5 + 3$ and $3 + 5$ are the only answers. There there isn't a 6 to go with the 2 and you would need to use two 4s.

Multi-Step: $5 + 1 = 6$ $6 + 2 = 8$ $7 + 3 = 10$ This is the only answer (unless you reverse the digits). The only way to make 10 is using the 7 and 3 and with the remaining numbers the only way to make 8 is using the 6 and 2.

Addition Within 10, page 16:

Explain: $5 + 3$ and $3 + 5$ are the only answers. There there isn't a 6 to go with the 2 and you would need to use two 4s.

Extend: $2 + 4 = 6$ $3 + 5 = 8$

I SEE REASONING – Y1

Answers and Guidance

Selected Questions

Addition Within 10, page 17:

Extend: $2 + 3 = 5$ $1 + 6 = 7$

Addition Within 10, page 19:

Small Difference Questions: Left: $6 = 4 + 2$ Right: $6 > 3 + 2$

Different Ways: Left: 3 or less Right: 9 or more (more answers using positive whole numbers).

Explain: Top: $0 \rightarrow 3$ Middle: 4 Right: 5 or more (most answers)