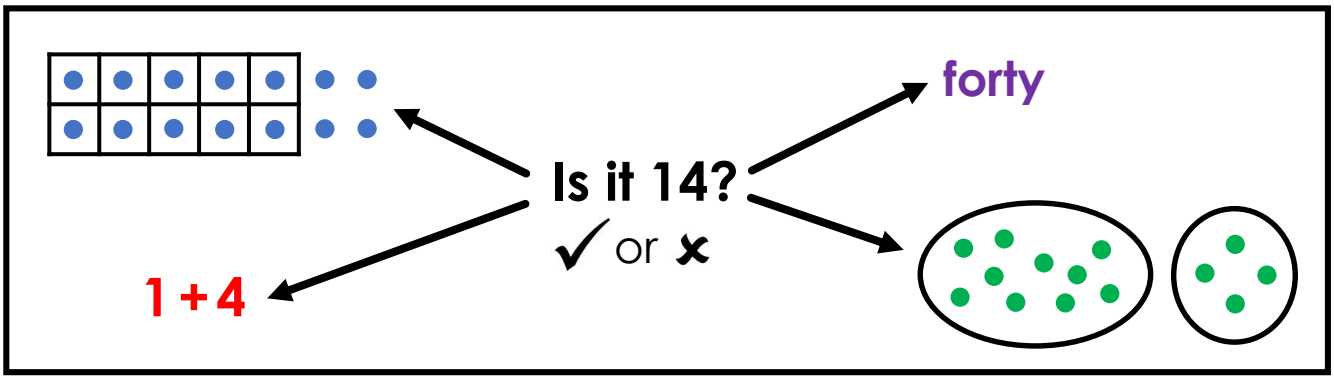
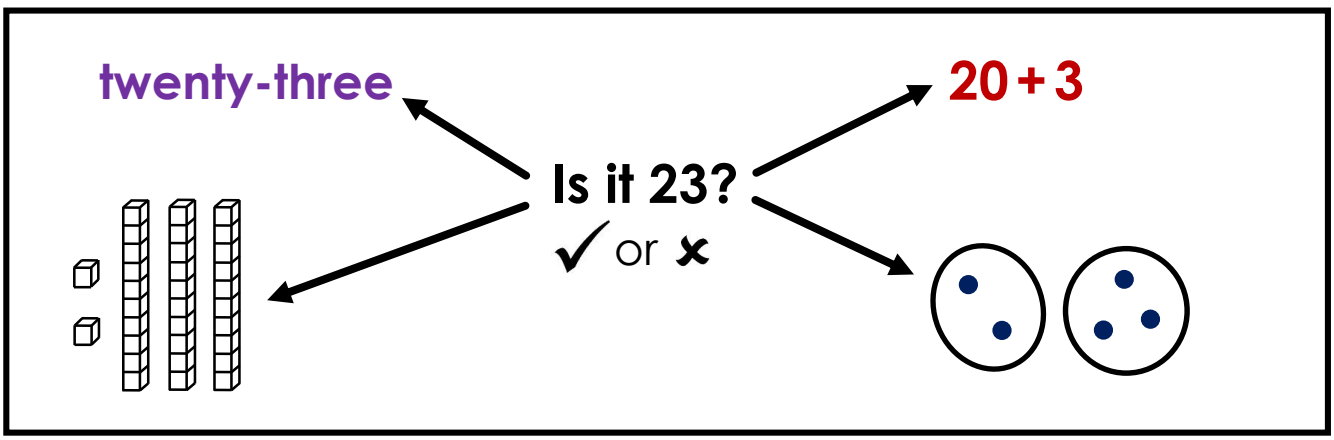
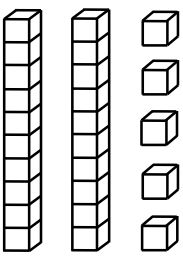
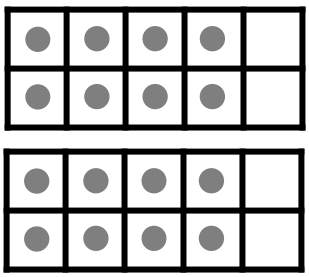
Task A Intro: 2-digit numbers

Teacher notes: the ***Task Build-Up*** (download from www.iseemaths.com/problem-solving-KS1) shows different ways to make 15 as a pre-curser to the ***Intro*** tasks.

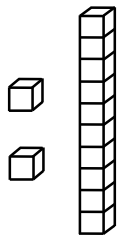
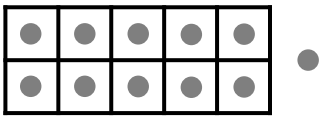
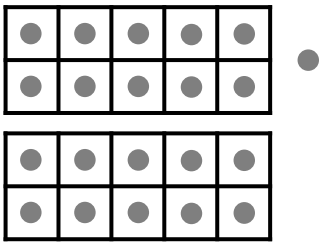
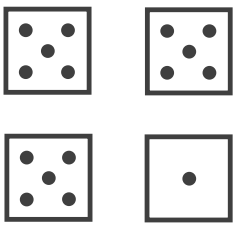
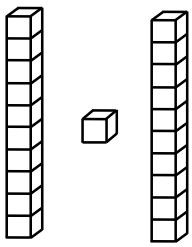
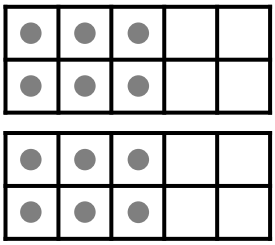
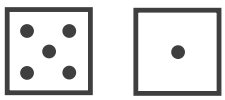




Which answer?

nineteen	19 or 91
thirty-one	13 or 31
	25 or 30
	18 or 16
1 + 7	8 or 17
10 + 7	107 or 17

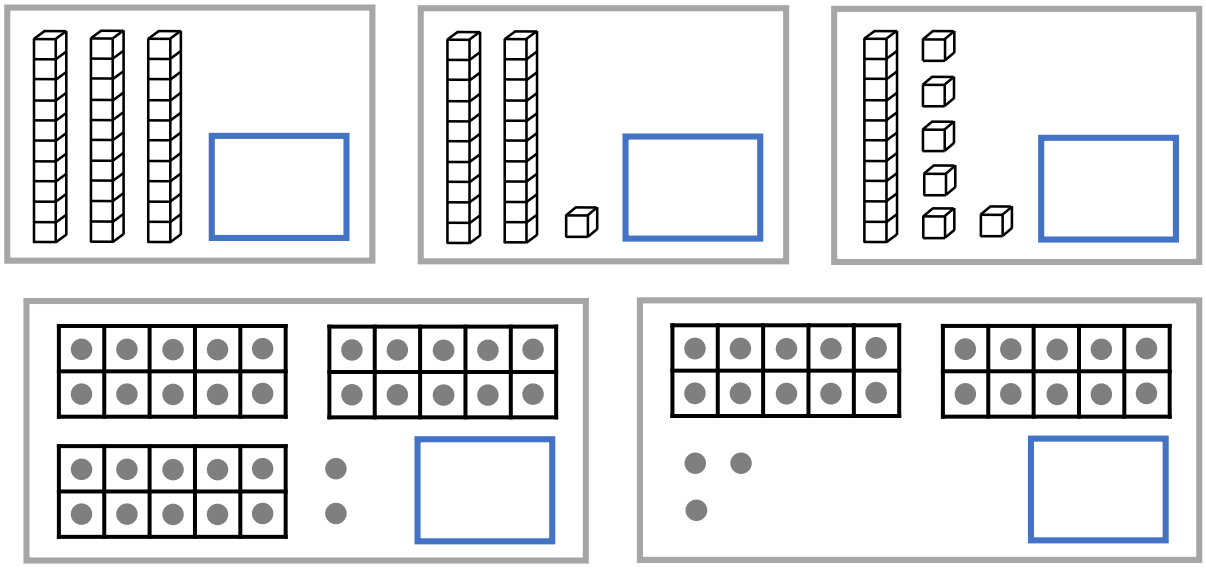
Task A: 2-digit numbers

Is it 21?	Is it 12?	Is it trash?
	twenty-one	
	10 + 2	twenty
		
2 + 1		twelve
	10 + 10 + 1	

Task A Questions: 2-digit numbers

How many? Put the answer in the blue box.

QUESTIONS

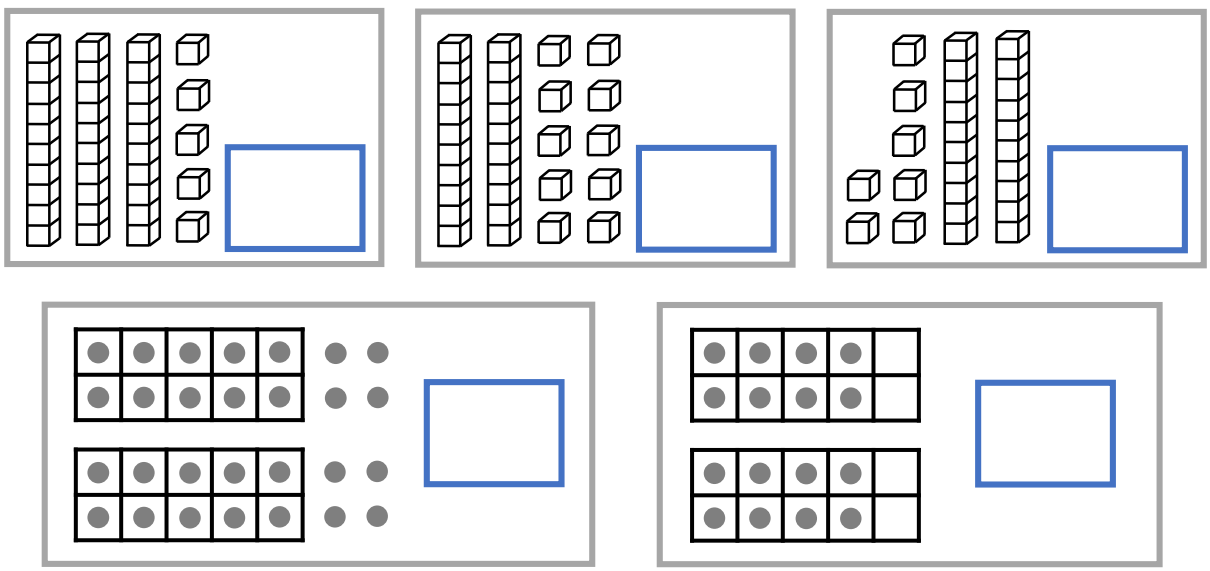


10 + 10 + 10 + 1 =

10 + 3 =

How many? Put the answer in the blue box.

QUESTIONS



10 + 2 + 10 + 2 + 10 =

2 + 4 =

2 + 40 =

Task A Extend: 2-digit numbers

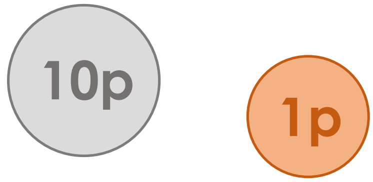
Teacher notes: 4 possible answers: three 10p coins and four 1p coins; two 10p coins and fourteen 1p coins; one 10p coin and twenty-four 1p coins; thirty-four 1p coins.

EXTEND

Use **10p** and **1p** coins.

Make 34p

Do in different ways.

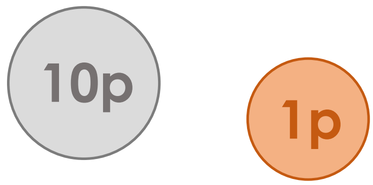


EXTEND

Use **10p** and **1p** coins.

Make 34p

Do in different ways.

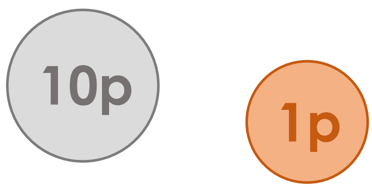


EXTEND

Use **10p** and **1p** coins.

Make 34p

Do in different ways.

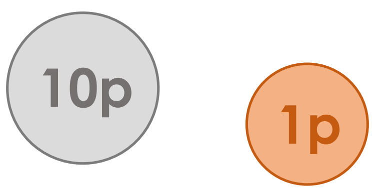


EXTEND

Use **10p** and **1p** coins.

Make 34p

Do in different ways.

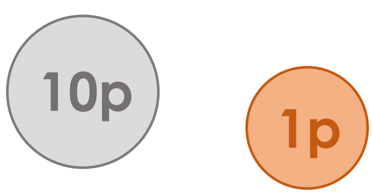


EXTEND

Use **10p** and **1p** coins.

Make 34p

Do in different ways.



Task E Intro: Bordering 10

Teacher notes: After the ***Intro*** task, show the ***Task Build-Up Part 1*** (download from www.iseemaths.com/problem-solving-KS1) to show addition calculations that border 10.

Which are **more than 10?**

9 + 3 **6 + 4** **8 + 3** **7 + 4** **8 + 5** **5 + 4** **8 + 2** **6 + 3**

Which are **more than 10?**

9 + 3 **6 + 4** **8 + 3** **7 + 4** **8 + 5** **5 + 4** **8 + 2** **6 + 3**

Which are **more than 10?**

9 + 3 **6 + 4** **8 + 3** **7 + 4** **8 + 5** **5 + 4** **8 + 2** **6 + 3**

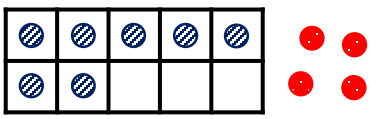
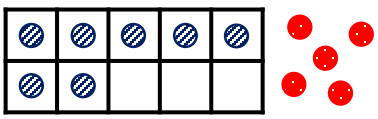
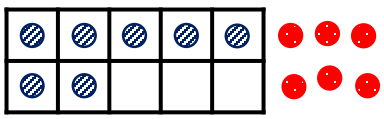
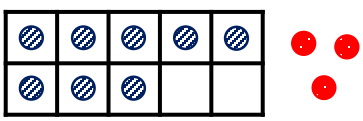
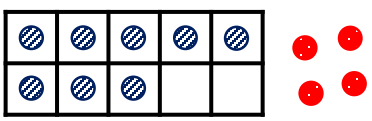
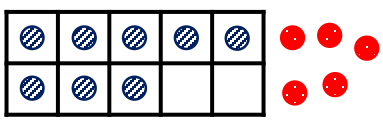
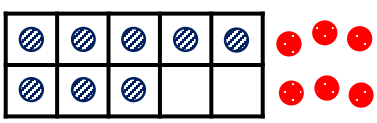
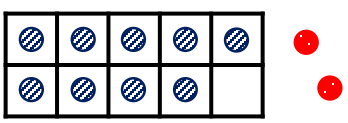
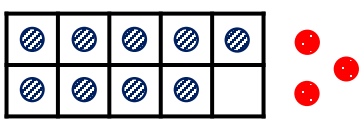
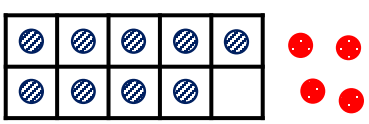
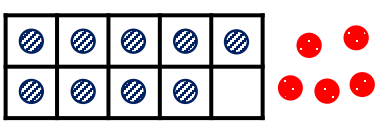
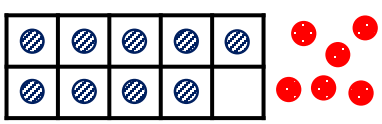
Which are **more than 10?**

9 + 3 **6 + 4** **8 + 3** **7 + 4** **8 + 5** **5 + 4** **8 + 2** **6 + 3**

Task E: Bordering 10

Teacher notes: Before this task show the ***Task Build-Up Part 1*** (download from www.iseemaths.com/problem-solving-KS1). After this task show the ***Task Build-Up Part 2.***

Cut out. ✂ **When you see ☐ say the missing number.**

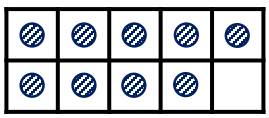
Split 4 into ☐ and ☐  7 + 4 = ☐	Split 5 into ☐ and ☐  7 + 5 = ☐	Split 6 into ☐ and ☐  7 + 6 = ☐
Split 3 into ☐ and ☐  8 + 3 = ☐	Split 4 into ☐ and ☐  8 + 4 = ☐	Split 5 into ☐ and ☐  8 + 5 = ☐
Split 6 into ☐ and ☐  8 + 6 = ☐	Split 2 into ☐ and ☐  9 + 2 = ☐	Split 3 into ☐ and ☐  9 + 3 = ☐
Split 4 into ☐ and ☐  9 + 4 = ☐	Split 5 into ☐ and ☐  9 + 5 = ☐	Split 6 into ☐ and ☐  9 + 6 = ☐

Task E Questions: Bordering 10

QUESTIONS

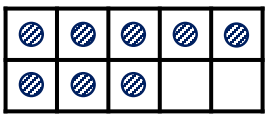
Draw the dots. Fill the boxes.

For 9+4, split 4 into ☐ and ☐



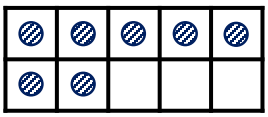
9 + 4 = ☐

For 8+3, split 3 into ☐ and ☐



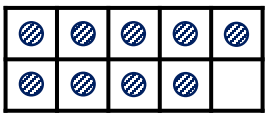
8 + 3 = ☐

For 7+5, split 5 into ☐ and ☐



7 + 5 = ☐

For 9+5, split 5 into ☐ and ☐



9 + 5 = ☐

QUESTIONS

Draw the dots. Fill the boxes.

For 9+4, split 4 into ☐ and ☐

9 + 4 = ☐

For 8+3, split 3 into ☐ and ☐

8 + 3 = ☐

For 7+5, split 5 into ☐ and ☐

7 + 5 = ☐

For 9+5, split 5 into ☐ and ☐

9 + 5 = ☐

Task E Extend: Bordering 10

Teacher notes: Solutions can be modelled using 10-frames.
Six answers: 9 + 4 = 13 4 + 9 = 13 8 + 5 = 13 5 + 8 = 13 9 + 5 = 14 5 + 9 = 14

EXTEND

Make a number sentence. Use these digits.
You can only use each digit once.

1 4 8
3 5 9

□ + □ = □□

How many answers can you find?

EXTEND

Make a number sentence. Use these digits.
You can only use each digit once.

1 4 8
3 5 9

□ + □ = □□

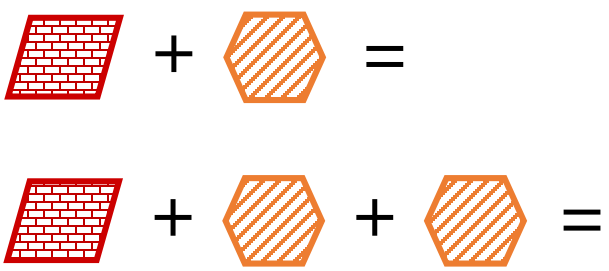
How many answers can you find?

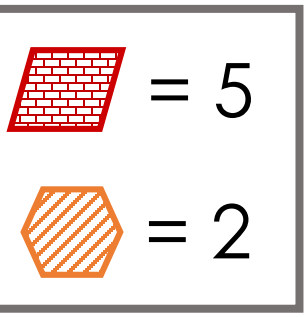
1	3	4	5	8	9
1	3	4	5	8	9

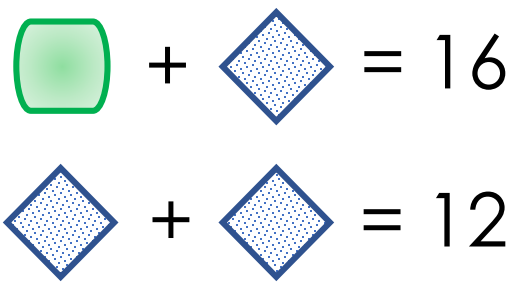
Task 2 Intro: Shapes for numbers

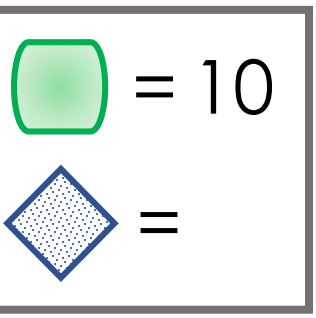
Teacher notes: use the ***Task Build-Up*** (download from www.iseemaths.com/problem-solving-KS1) to introduce this activity is task 2, part 1. Then the children answer the questions below. This is the first part of task 2.

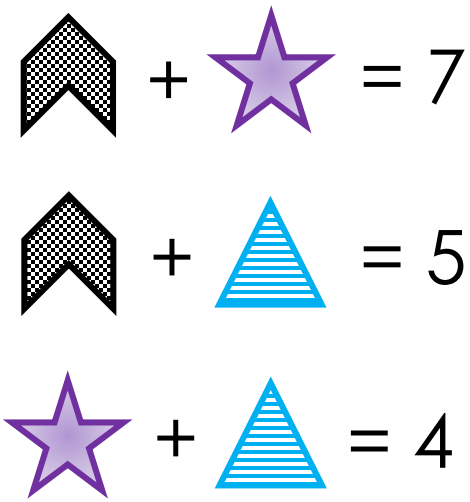
INTRO TASK

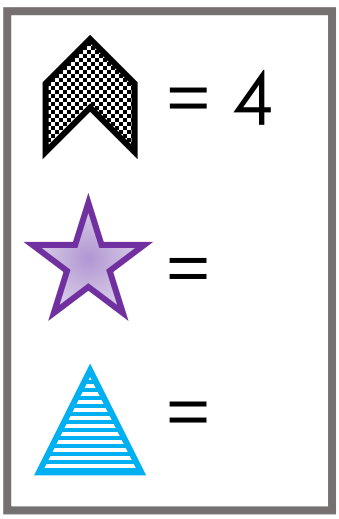








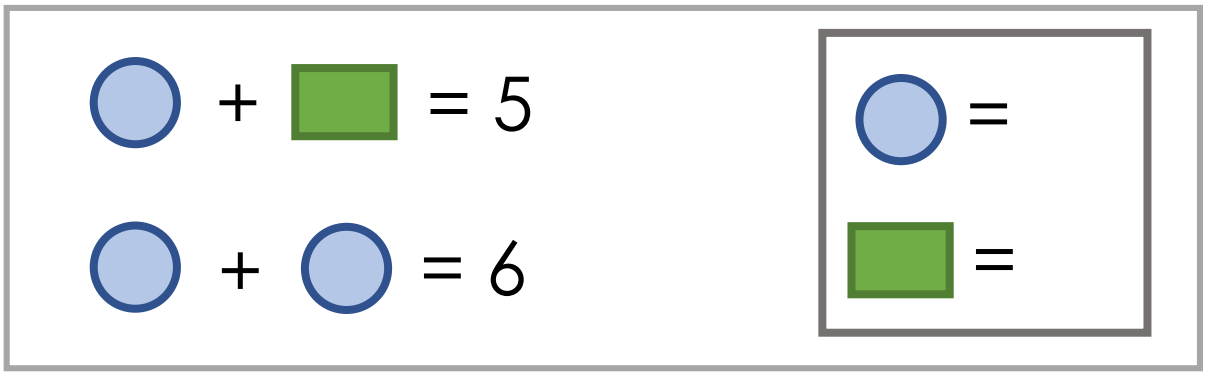


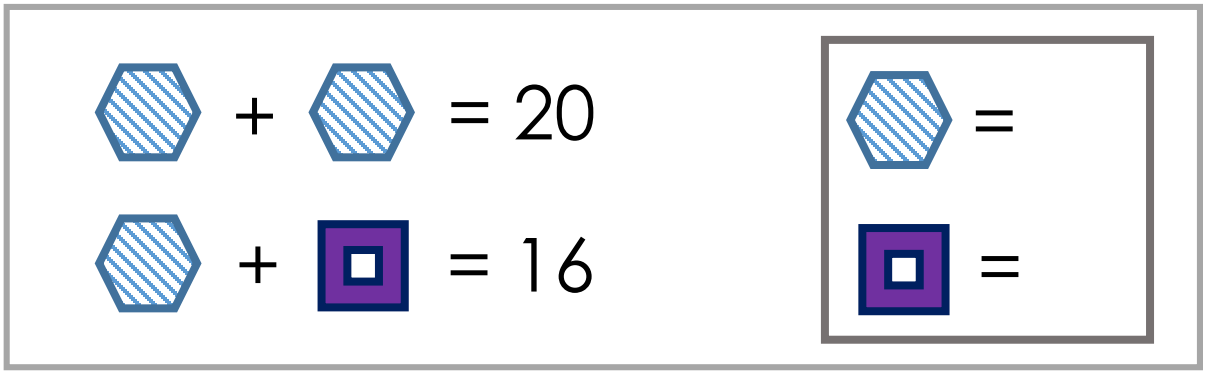


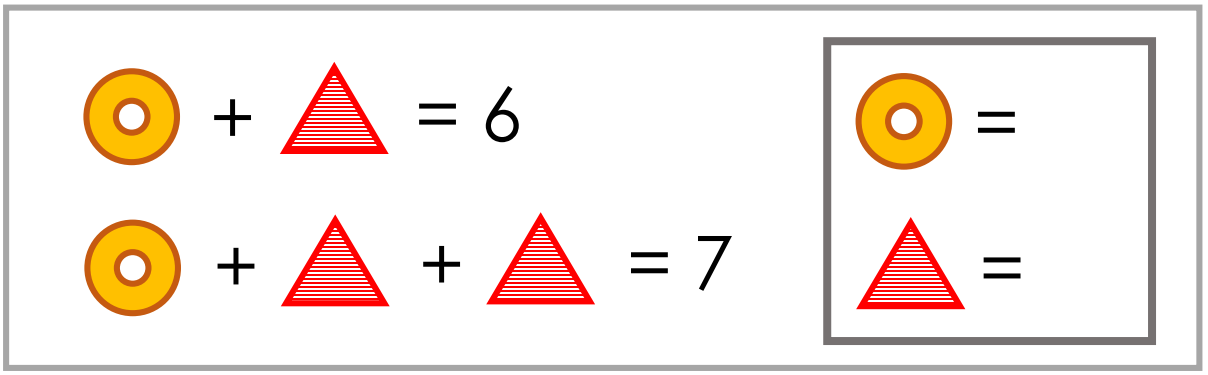
Task 2 Questions: Shapes for numbers

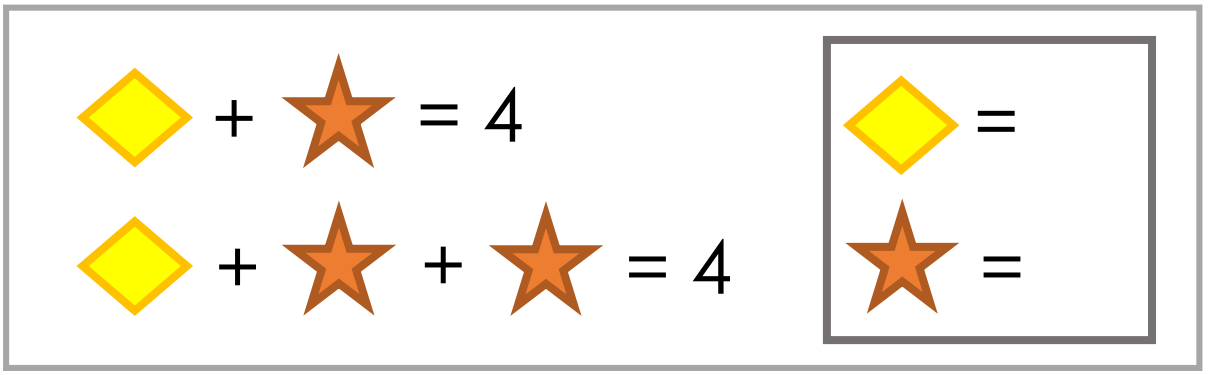
Teacher notes: the ***Task Build-Up*** (download from www.iseemaths.com/problem-solving-KS1) to introduce these questions is task 2, part 2. In these examples, questions are presented line-by-line. When viewing these examples, ask 'Which shape do you work out first?' The questions below are the 'green' challenge, and questions on the next page are the 'yellow' challenge.

TASK



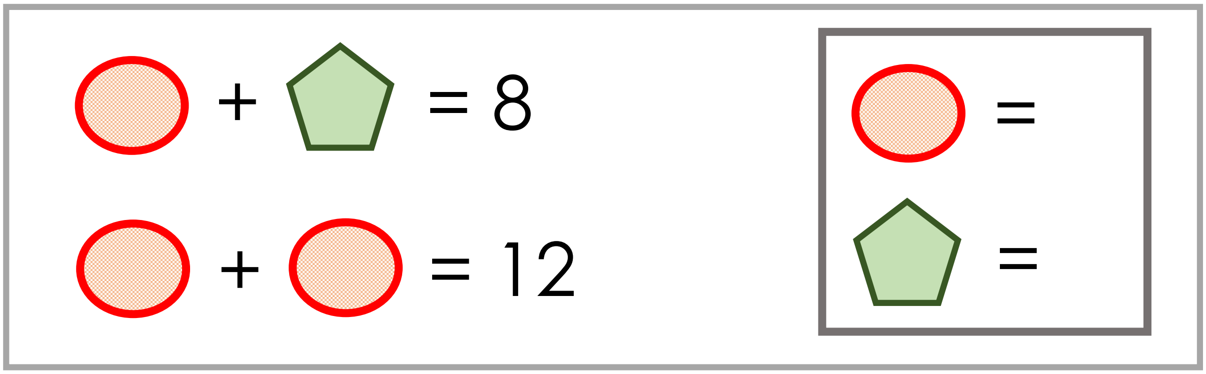


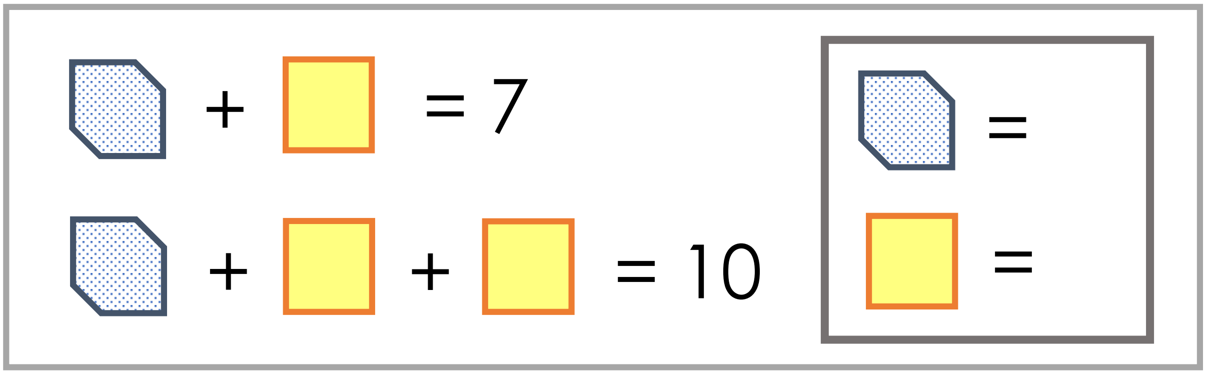


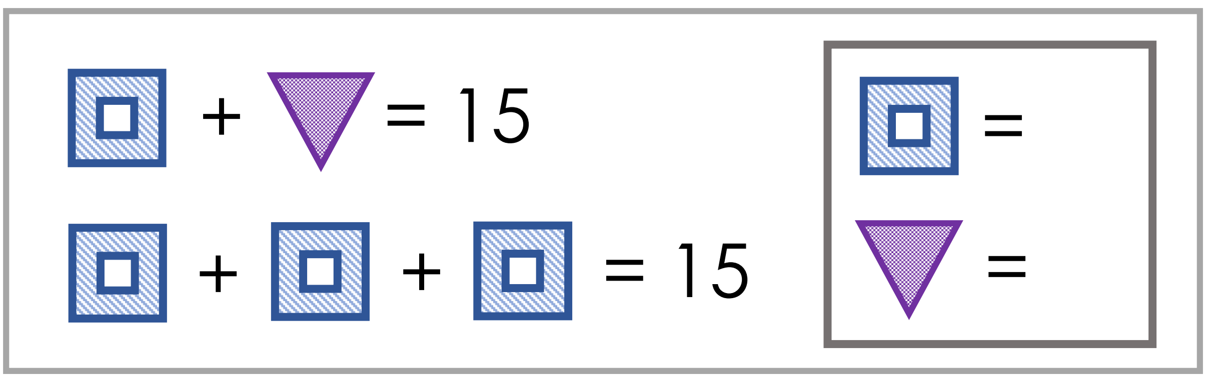


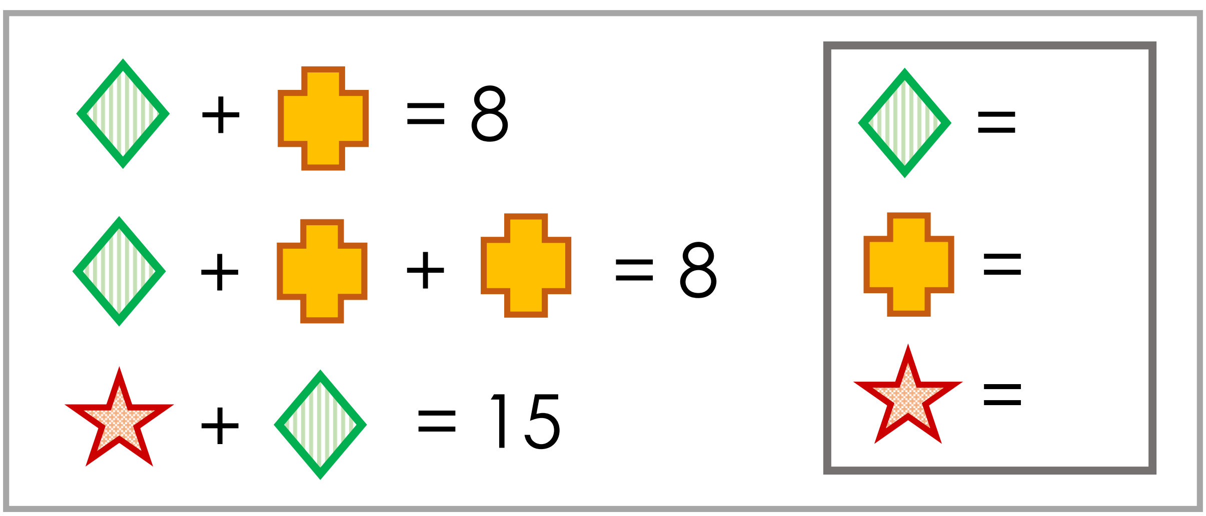
Task 2 Questions: Shapes for numbers

TASK





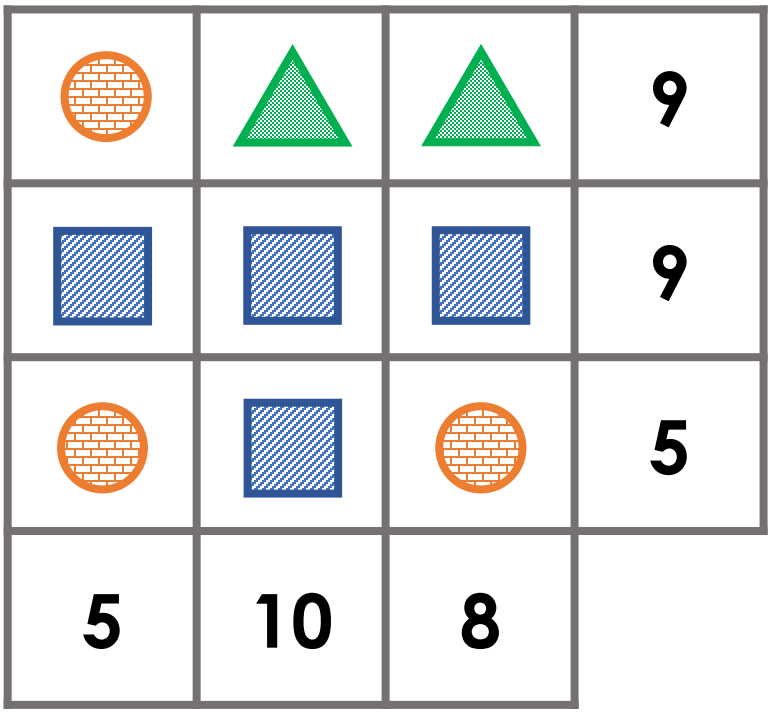


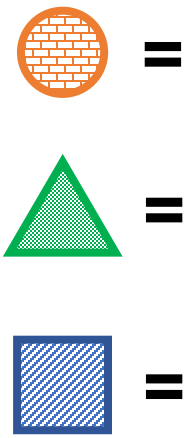


Task 2 Extension: Shapes for numbers

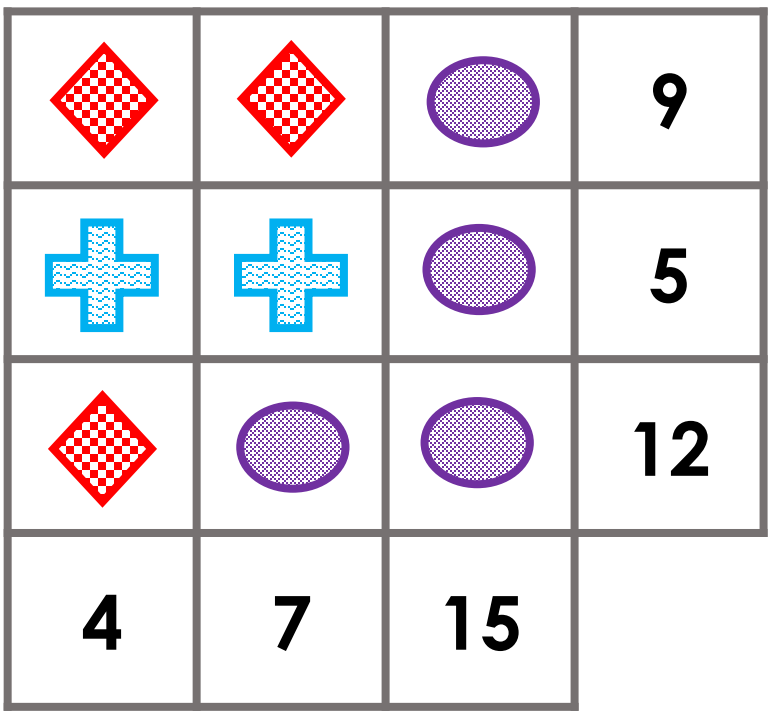
Teacher notes: the number at the end of each column/row is the sum for the shapes in that line. Note that the best starting point is the column/row with all the same shape.
Answers for table 1:
Answers for table 2:

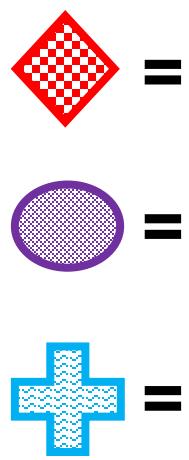
EXTEND





EXTEND





Task 3 Intro: Three numbers

Circle **two dice** that add to make **6**

Circle **three dice** that add to make **6**

Circle **three dice** that add to make **8**

I think of **3 numbers.** They are all **different.**

They **add** to make **8.**

✓ or ✗

4 + 3 + 1

6 + 2

4 + 2 + 2

Task 3 Questions: Three numbers

Teacher notes: equipment can be used to access the tasks, for example putting counters on three whiteboards or putting red, blue and green cubes in 10-frames. The 'explain' prompt extends the green task; the 'extend' prompt extends the yellow task.

TASK

I think of **3 numbers.**
They are all **different.**
They **add** to make **10.**

TASK

I think of **3 numbers.**
They are all **different.**
They **add** to make **10.**

TASK

I think of **3 numbers.**
They are all **different.**
They **add** to make **12.**

TASK

I think of **3 numbers.**
They are all **different.**
They **add** to make **12.**

EXPLAIN

I think of **3 numbers.**
They are all **different.**
They **add** to make **10.**

True or false: ✓ ✗

7 and 3

4, 2 and 4

6, 3 and 1

EXTEND

I think of **3 different numbers.**
They **add** to make **14.**
Each number is **less than 8.**
Find 3 possible answers.

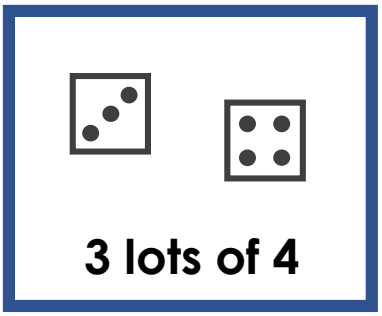
Answer 1: ☐ ☐ ☐

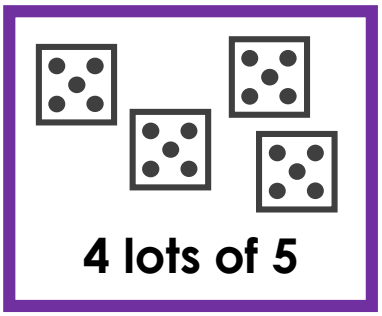
Answer 2: ☐ ☐ ☐

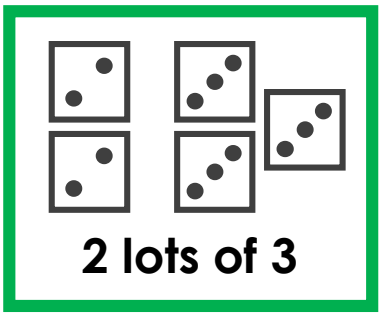
Answer 3: ☐ ☐ ☐

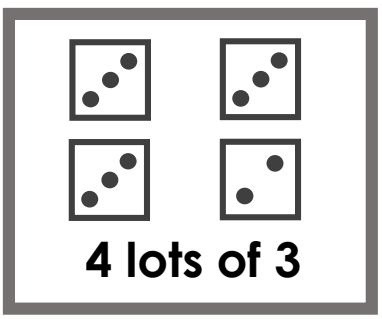
Task 4 Intro: Dice patterns

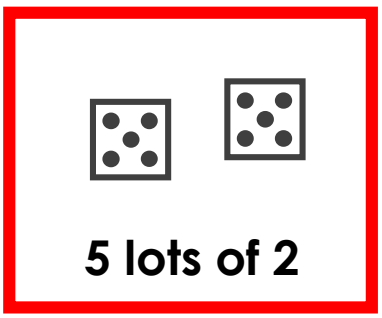
True or false?

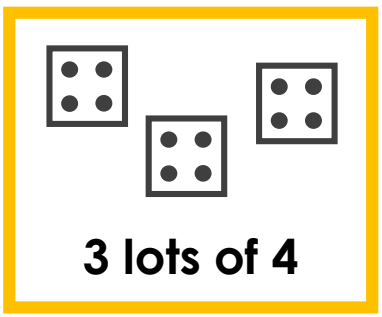






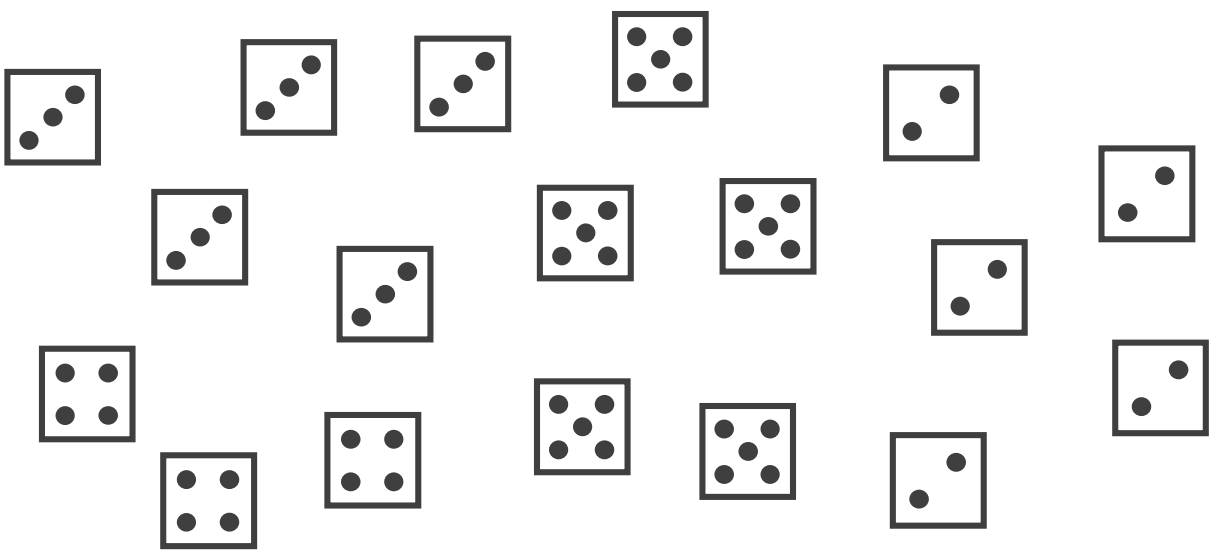






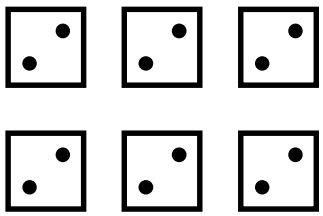
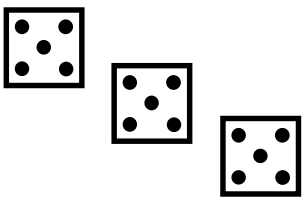
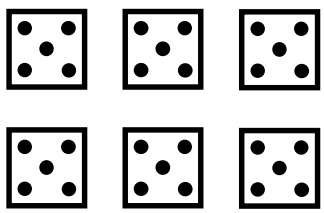
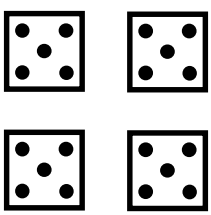
Circle 3 lots of 5.

Circle 4 lots of 2.



Task 4 Activity: Dice patterns

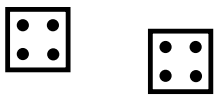
Teacher notes: cut out and mix up the images and number sentences. Children match the images to the two corresponding number sentences. They fill in the missing numbers and draw the missing picture.

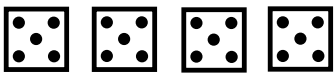
5 lots of 2 = 10	3 × 5 = 15	
6 lots of 5 = 30	5 × 2 = ☐	
6 lots of 2 = ☐	4 × ☐ = 20	
3 lots of 5 = ☐	6 × 5 = 30	
4 lots of ☐ = 20	6 × 2 = 12	Missing picture:

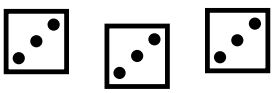
Task 4 Questions: Dice patterns

Teacher notes: for the main task, children fill in the gaps. For the extension task, recognise for example that 5+5+10 is 4 lots of 5 as there are two lots of 5 in 10.

TASK

Dot pattern	'lots of' sentence	× sentence
	2 lots of ☐ = 8	2 × ☐ = 8

Dot pattern	'lots of' sentence	× sentence
	☐ lots of 5 = 20	☐ × 5 = 20

Dot pattern	'lots of' sentence	× sentence
	☐ lots of ☐ = 9	☐ × ☐ = 9

Dot pattern	'lots of' sentence	× sentence
	4 lots of 2 = ☐	4 × 2 = ☐

EXTEND

How many lots of 5?

4 + 1 + 4 + 1 + 4 + 1 is ☐ lots of 5.

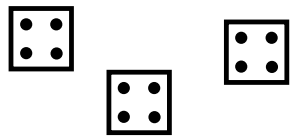
5 + 5 + 10 is ☐ lots of 5.

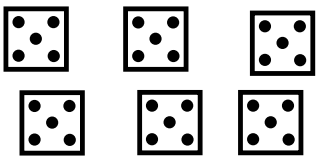
10 + 10 + 10 is ☐ lots of 5.

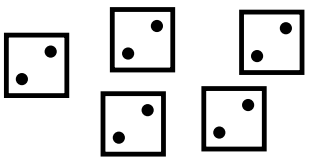
Task 4 Questions: Dice patterns

Teacher notes: for the main task, children fill in the gaps. For the extension task, recognise for example that 5+5+20 is 6 lots of 5 as there are four lots of 5 in 20.

TASK

Dot pattern	'lots of' sentence	× sentence
	**3** lots of ☐ = ☐	**3** × ☐ = ☐

Dot pattern	'lots of' sentence	× sentence
	☐ lots of **5** = ☐	☐ × **5** = ☐

Dot pattern	'lots of' sentence	× sentence
	☐ lots of ☐ = **10**	☐ × ☐ = **10**

Dot pattern	'lots of' sentence	× sentence
	☐ lots of **3** = **15**	☐ × **3** = **15**

EXTEND

How many lots of 5?

5 + 5 + 20 is ☐ lots of 5.

10 + 10 + 15 is ☐ lots of 5.

3 + 4 + 1 + 4 + 1 + 2 is ☐ lots of 5.