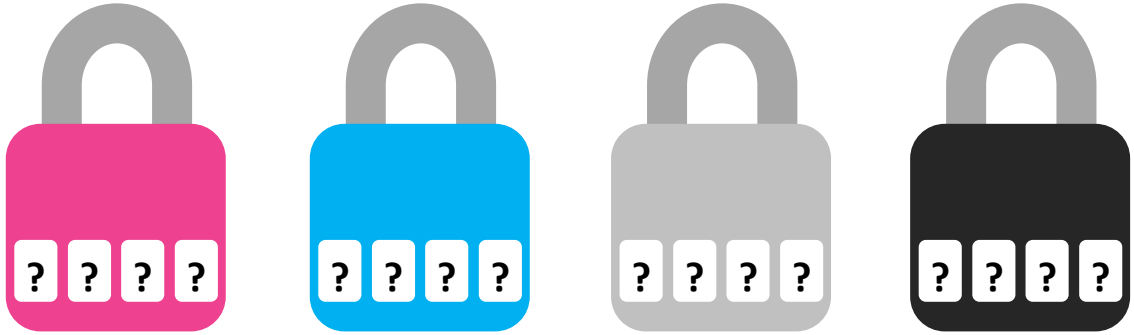
Number Stacks

- Making sense of Numbers -

Puzzle Box Challenges



Year 1

INSTRUCTIONS

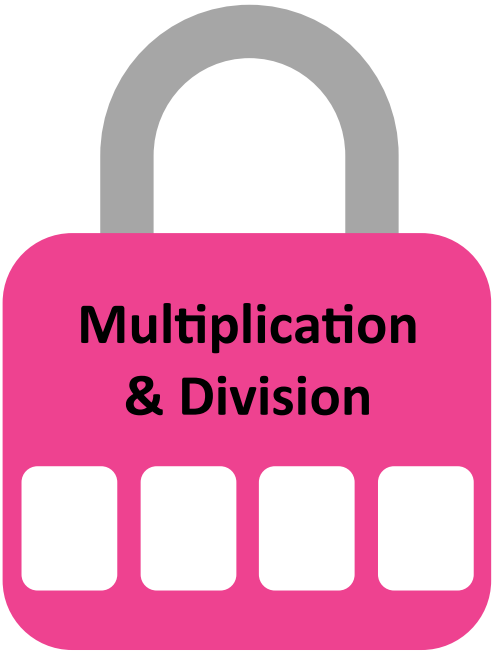
Number Stacks Puzzle Box Challenges are designed to help children practise the fluency skills they have learnt across different areas of maths. Challenges can be completed either with or without using practical resources depending on the children's level of confidence.

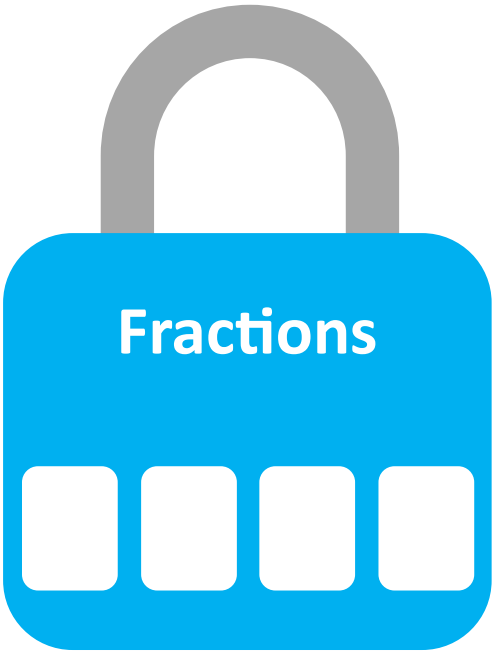
There are 10 sets of challenges (A to J) and all you need to do is choose one set and give them to your children to solve! If you have one of our real-life Puzzle Boxes, set each padlock to the relevant solution before you begin or if not, simply print out our answer sheet for the children to record their codes and let them know when they are correct.

Why not put a mystery reward inside the box for a bit of extra motivation!

Can you solve all the puzzles to open the box?

Puzzle Box Challenge: Answer Sheet





Number Stacks

Y1A

Number & Place Value

Add both digits in each separate answer for your code.

One more than 16

One more than 23

One less than 41

One less than 36

Number Stacks

Y1A

Addition & Subtraction:

The four answers will give you your code.

6 + ? = 10

3 + ? = 10

10 = 5 + ?

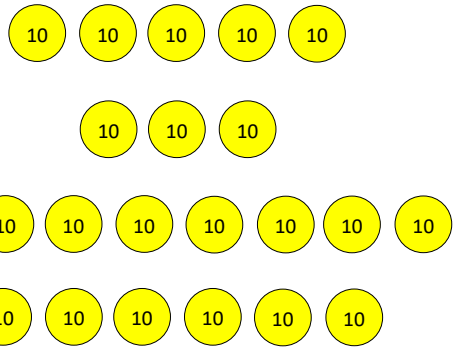
10 = ? + 1

Number Stacks

Y1A

Multiplication & Division:

Add the digits in separate each answer for your code.



5 x 10 =

3 x 10 =

8 x 10 =

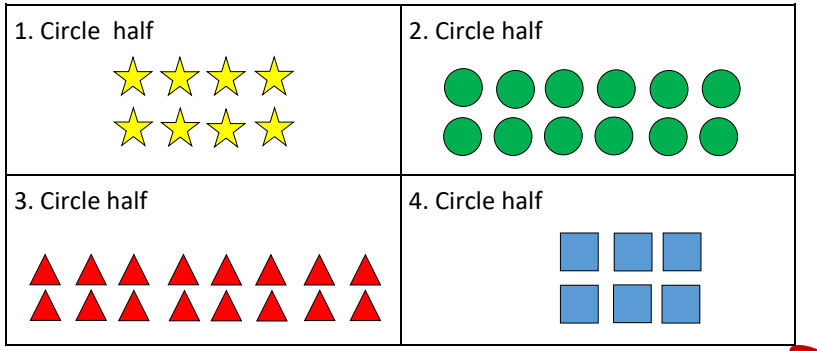
6 x 10 =

Number Stacks

Y1A

Fractions:

The four separate answers will make your code



Number Stacks

Y1B

Number & Place Value

Add the 2 digits in each missing number for your code.

50, 40, 30, ?

32, 33, 34, ?

20, 19, 18, ?

40, 50, ?, 70

Number Stacks

Y1B

Addition & Subtraction:

Add both digits in each separate answer for your code.

3 + 5 =

7 + 6 =

8 + 7 =

9 + 4 =

Number Stacks

Y1B

Multiplication & Division:

Add the digits in each separate answer for your code.

Double 5

Double 7

Double 2

Double 6

Number Stacks

Y1B

Fractions:

Decide if each fact is true or false to get your code

	True	False
 $\frac{1}{2}$ is shaded	*3*	*8*
 $\frac{1}{4}$ is shaded	*2*	*1*
 $\frac{1}{4}$ is shaded	*7*	*6*
 $\frac{1}{2}$ is shaded	*5*	*9*

Number Stacks

Y1C

Number & Place Value

Add both digits in each separate answer for your code.

Which number is bigger?

27 or 31

43 or 40

50 or 38

63 or 35

Number Stacks

Y1C

Addition & Subtraction:

The missing numbers will give you your code.

1.

6	
2	?

2.

9	
4	?

3.

5	
?	4

4.

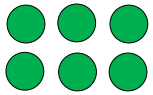
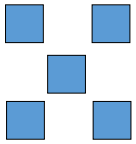
8	
6	?

Number Stacks

Y1C

Multiplication & Division:

Add the digits in each separate answer for your code.

1. Double 	2. Double 
3. Double 	4. Double 

Number Stacks

Y1C

Fractions:

The four answers will give you your code.

$\frac{1}{2}$ of 8 =

$\frac{1}{4}$ of 12 =

$\frac{1}{4}$ of 20 =

$\frac{1}{2}$ of 14 =

Number Stacks

Y1D

Number & Place Value

Find the missing numbers to get your code.

63 = 60 + ?

20 + ? = 27

? + 40 = 45

29 = ? + 20

Number Stacks

Y1D

Addition & Subtraction:

The four answers will make your code.

14 - 5 =

12 - 7 =

9 - 3 =

15 - 6 =

Number Stacks

Y1D

Multiplication & Division:

Split each bar into equal parts to get your code.

1.

12	
?	?

2.

6	
?	?

3.

10	
?	?

4.

16	
?	?

Number Stacks

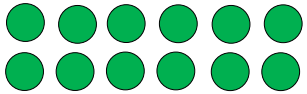
Y1D

Fractions:

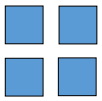
The four separate answers will give you your code

1. Circle a quarter

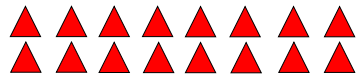
2. Circle a quarter



3. Circle a quarter



4. Circle a quarter



Number Stacks

Y1E

Number & Place Value

Add the 2 digits in each missing number for your code.

One fewer than 26

One greater than 19

One less than 51

One more than 89

Number Stacks

Y1E

Addition & Subtraction:

The four answers will give you your code.

8 - 5 =

6 + 3 =

9 - 7 =

2 + 4 =

Number Stacks

Y1E

Multiplication & Division:

Add the digits in each separate answer for your code.

6	6	2 x 6
8	8	2 x 8
1	1	2 x 1
4	4	2 x 4

Number Stacks

Y1E

Fractions:

Decide if each fact is true or false to get your code

	True	False
 $\frac{1}{2}$ is shaded	*2*	*4*
 $\frac{1}{2}$ is shaded	*6*	*3*
 $\frac{1}{4}$ is shaded	*8*	*5*
 $\frac{1}{4}$ is shaded	*6*	*7*

Number Stacks

Y1F

Number & Place Value

Add both digits in each missing number for your code.

27, 26, 25, ?

90, 80, 70, ?

20, 19, 18, ?

73, 72, 71, ?

Number Stacks

Y1F

Addition & Subtraction:

The four missing numbers will give you your code.

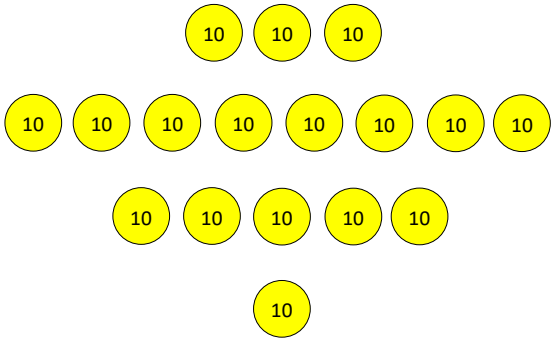
1. 10 → 3, ?
2. 10 → 6, ?
3. 10 → ?, 8
4. 10 → ?, 5

Number Stacks

Y1F

Multiplication & Division:

Add the digits in separate each answer for your code.



3 x 10 =

8 x 10 =

5 x 10 =

1 x 10 =

Number Stacks

Y1F

Fractions:

The four answers will make your code.

$\frac{1}{2}$ of 14 =

$\frac{1}{2}$ of 10 =

$\frac{1}{2}$ of 8 =

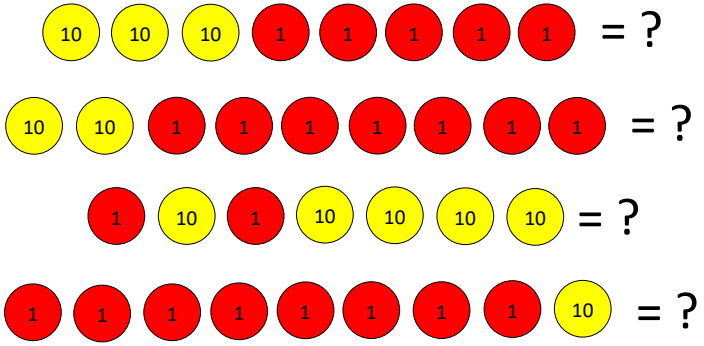
$\frac{1}{2}$ of 18 =

Number Stacks

Y1G

Number & Place Value

Add both digits in each separate answer for your code.



Number Stacks

Y1G

Addition & Subtraction:

The missing numbers will give you your code.

1.

?	
4	3

2.

?	
2	4

3.

13	
?	9

4.

15	
8	?

Number Stacks

Y1G

Multiplication & Division:

Find the missing numbers to get your code.

Double ? = 12

Double ? = 18

Double ? = 6

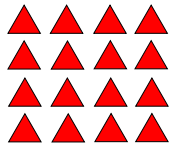
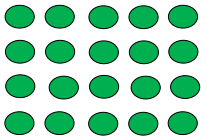
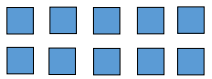
Double ? = 14

Number Stacks

Y1G

Fractions:

The four separate answers will make your code

1. Circle $\frac{1}{2}$ 	2. Circle $\frac{1}{4}$ 
3. Circle $\frac{1}{2}$ 	4. Circle $\frac{1}{4}$ 

Number Stacks

Y1H

Number & Place Value

Add both digits in each separate answer for your code.

Which number is smaller?

18 or 80

70 or 77

15 or 51

36 or 46

Number Stacks

Y1H

Addition & Subtraction:

The four answers will give you your code.

16 - 7 =

12 - 8 =

19 - 10 =

15 - 9 =

Number Stacks

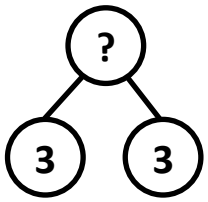
Y1H

Multiplication & Division:

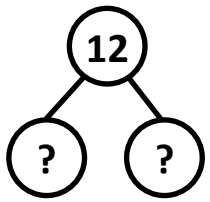
Find the missing digits for your code.

The top number has been split into 2 equal parts

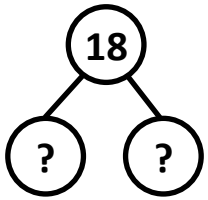
1.



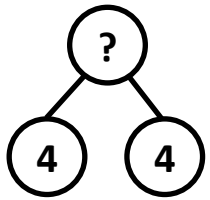
2.



3.



4.



Number Stacks

Y1H

Fractions:

Decide if each bar model is correct for your code

	✓	X
12: 4 4 4 4	*3*	*9*
20: 5 5 5 5	*4*	*6*
8: 3 3 3 3	*5*	*0*
40: 4 4 4 4	*8*	*2*

Number Stacks

Y1I

Number & Place Value

Add both digits in each separate answer for your code.

One fewer than 19

One greater than 79

One more than 11

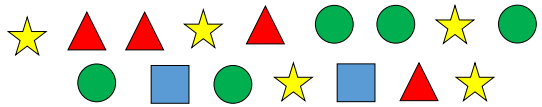
One less than 91

Number Stacks

Y1I

Addition & Subtraction:

The four answers will make your code.



How many ★ ?

How many ● and ■ altogether?

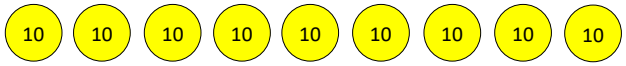
How many more ★ than ▲ ?

How many more ● than ■ ?

Y1I

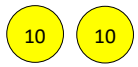
Multiplication & Division:

Add the digits in separate each answer for your code.

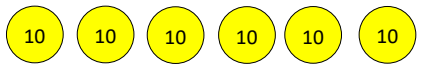


9 x 10 =

5 x 10 =



2 x 10 =



6 x 10 =

Number Stacks

Y1I

Fractions:

The four answers will make your code.

$\frac{1}{2}$ of 18 =

$\frac{1}{4}$ of 8 =

$\frac{1}{2}$ of 14 =

$\frac{1}{4}$ of 12 =

Number Stacks

Y1J

Number & Place Value

Add both digits in each separate answer for your code.

Which number is smaller?

35 or 26

43 or 34

30 or 51

61 or 26

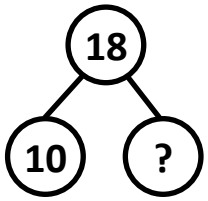
Number Stacks

Y1J

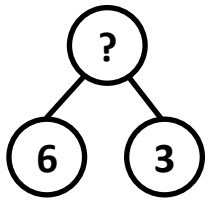
Addition & Subtraction:

The four missing numbers will give you your code.

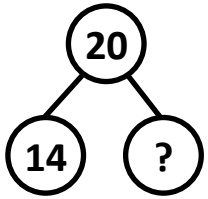
1.



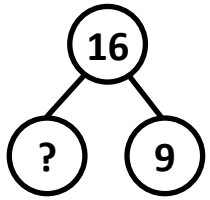
2.



3.



4.



Number Stacks

Y1J

Multiplication & Division:

Add the digits in each separate answer for your code.

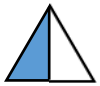
8	8	8 x 2
4	4	4 x 2
7	7	7 x 2
5	5	5 x 2

Number Stacks

Y1J

Fractions:

Decide if each fact is true or false to get your code

	True	False
 $\frac{1}{2}$ is shaded	3	9
 $\frac{1}{4}$ is shaded	8	4
 $\frac{1}{4}$ is shaded	5	7
 $\frac{1}{2}$ is shaded	6	2

Number Stacks

Puzzle Box Solutions

YEAR 1	Number & Place Value	Addition & Subtraction	Multiplication & Division	Fractions, Decimals & Percentages
Set A	8648	4759	5386	4683
Set B	2886	8464	1543	3175
Set C	4759	4512	6351	4357
Set D	3759	9569	6358	2314
Set E	7259	3926	3728	4687
Set F	6687	7425	3851	7549
Set G	8979	7647	6937	8553
Set H	9769	9496	6698	9402
Set I	9839	5713	9526	9273
Set J	8738	8967	7851	3456

Number Stacks