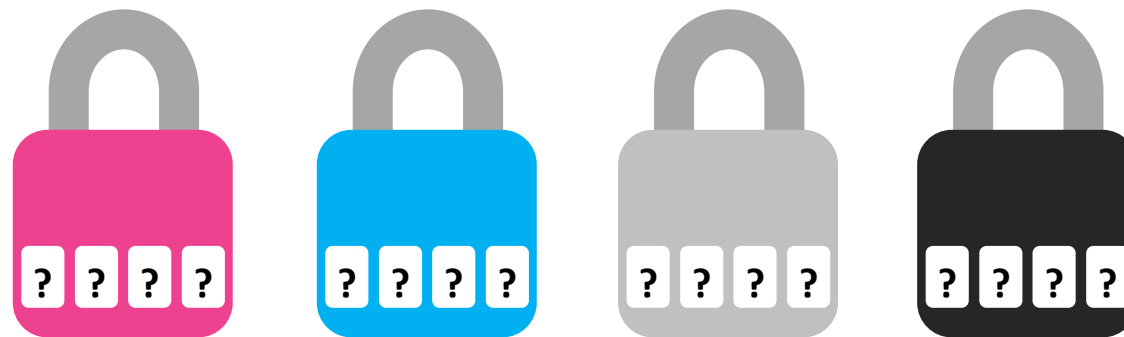# Number Stacks
- Making sense of Numbers -

Puzzle Box Challenges
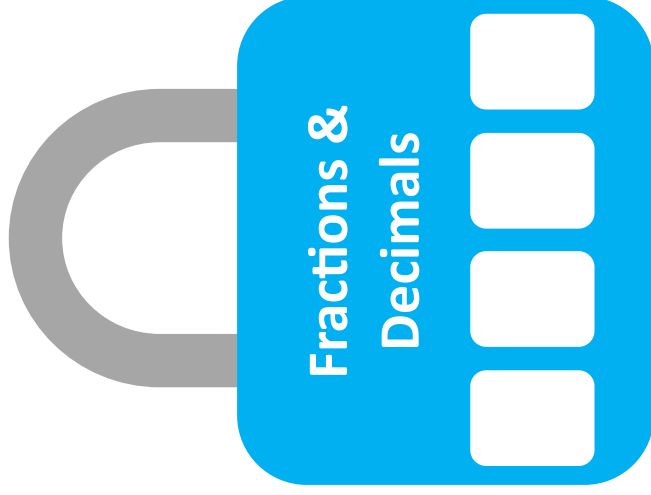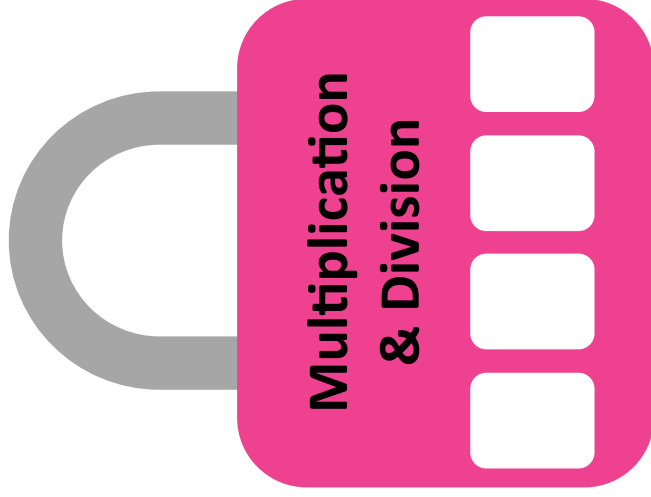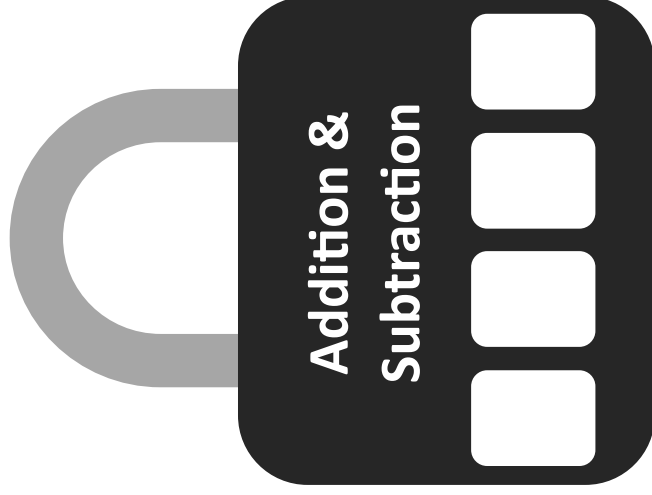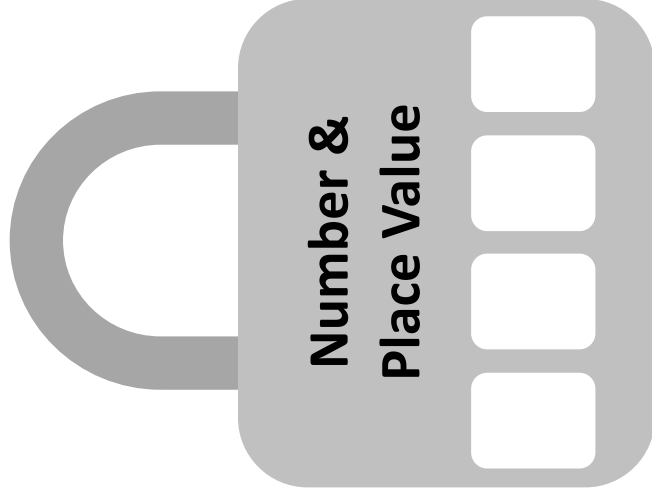
Year 4

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

Addition & Subtraction

Fractions & Decimals

Number & Place Value

Multiplication & Division

Number Stacks

Y4A

Number & Place Value

I am a 4 digit number and all my digits are different.

My tens and ones digits add up to 10.

I am an odd number with only one even digit.

My hundreds and tens digits add up to 15.

My thousands digit is my smallest.

All my digits add up to 19.

Y4A

Addition & Subtraction:

Find the total of all four answers to get your code.

147 + 256

793 - 238

2869 + 1347

5782 - 4258

Y4A

Multiplication & Division:

The smallest answer will be your code.

483 x 5

354 x 8

845 x 3

583 x 4

Y4A

Fractions, Decimals & Percentages:

The four separate answers will make your code

$\frac{1}{3}$ of 27

$\frac{2}{6}$ of 24

$\frac{3}{8}$ of 16

$\frac{2}{7}$ of 28

Y4B

Number & Place Value

The answer will be your code.

Start at 6927...

Add 1, subtract 1000, add 100, subtract 10,

add 1, subtract 1000, subtract 10, add 1,

subtract 1000, add 1, add 10

Y4B

Addition & Subtraction:

Add up all four answers to get your code.

? + 125 = 440

825 - ? = 374

422 = 173 + ?

324 = ? - 69

Y4B

Multiplication & Division:

Use the four remainders as your code.

54 ÷ 7

43 ÷ 9

26 ÷ 6

52 ÷ 8

Y4B

Fractions, Decimals & Percentages:

Find the missing digits to get your code.

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

$$\frac{2}{6} = \frac{?}{18}$$

$$\frac{?}{5} = \frac{18}{30}$$

$$\frac{6}{?} = \frac{24}{32}$$

Number & Place Value

Y4C

Add all four answers together to get your code.

2830 = 2000 + ? + 30

3020 = 20 + ?

7028 = 20 + 7000 + ?

4 + 8000 + ? + 900 = 8954

Addition & Subtraction:

Y4C

Add up all four answers to get your code.

Find the difference between 842 and 695

Find the total of 387 and 951

Find the sum of 507 and 736

How much more is 742 than 358?

Multiplication & Division:

Y4C

Use the four remainders as your code.

(5 x 7) - (8 x 4)

(64 ÷ 8) - (49 ÷ 7)

(7 x 9) - (11 x 5)

(42 ÷ 6) - (48 ÷ 12)

Fractions, Decimals & Percentages:

Y4C

Round each decimal to the nearest whole number to get your code.

3.7

6.4

8.5

0.6

Y4D

Number & Place Value

Add all four answers to get your code.

Round 4837 to the nearest ten

Round 2099 to the nearest hundred

Round 1499 to the nearest thousand

Round 995 to the nearest ten

Y4D

Addition & Subtraction:

The largest answer will be your code.

3823 + 2008

7003 - 1169

1915 + 3928

8510 - 2671

Y4D

Multiplication & Division:

Add all four answers together to get your code.

300 x 6

20 x 80

4 x 700

60 x 50

Y4D

Fractions, Decimals & Percentages:

Add the 2 digits in each separate answer for your code.

$\frac{3}{7}$ of 56

$\frac{5}{9}$ of 54

$\frac{7}{8}$ of 48

$\frac{5}{6}$ of 42

Number & Place Value

I am a 4-digit number.

My two middle digits are both the same.

All my digits are odd.

My thousands and tens digits add up to 8.

My hundreds and ones digits add up to 16.

My thousands digit is my smallest.

Addition & Subtraction:

Add up all four answers to get your code.

$$? - 147 = 535$$

$$983 = ? + 692$$

$$829 - ? = 473$$

$$620 = 819 - ?$$

Multiplication & Division:

Use the largest answer as your code.

$$846 \times 3$$

$$752 \times 4$$

$$673 \times 5$$

$$529 \times 6$$

Fractions, Decimals & Percentages:

Add the 2 digits in each separate answer for the code.

$$0.7 + 0.5$$

$$1.5 - 0.8$$

$$2.6 + 1.6$$

$$5.2 - 2.7$$

Number & Place Value

The answer will be your code.

Start at 9082...

Add 10, subtract 1, add 1000, subtract 100, add 10, subtract 1, subtract 1000, add 10, subtract 100, subtract 1

Addition & Subtraction:

Subtract the smallest answer from the largest.

What is 493 and 551 altogether?

How much greater is 863 than 271?

Find the difference between 983 and 629

Find the total of 791, 345 and 628

Multiplication & Division:

The four separate answers will be your code.

$(7 \times 8) - (11 \times 5)$

$(42 \div 7) - (60 \div 12)$

$(36 \div 4) - (72 \div 8)$

$(6 \times 9) - (7 \times 7)$

Fractions, Decimals & Percentages:

Find the missing digits to get your code.

$$\frac{?}{4} = \frac{15}{20}$$

$$\frac{2}{7} = \frac{?}{28}$$

$$\frac{4}{?} = \frac{24}{30}$$

$$\frac{8}{12} = \frac{2}{?}$$

Y4G

Number & Place Value

Add all four missing numbers to get your code.

? + 8 + 3000 = 3408

5852 = 2 + 800 + 5000 + ?

2000 + ? + 20 = 2022

7770 = 700 + 70 + ?

Number Stacks
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Y4G

Addition & Subtraction:

Add all four answers to get your code.

Calculate the change from £20 if I buy....

A book for £7.89

A game for £14.95

A burger for £4.50 and chips for £2.80

Four comics for £1.55 each

Number Stacks
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Y4G

Multiplication & Division:

The four remainders will be your code.

61 ÷ 7

83 ÷ 5

70 ÷ 6

55 ÷ 8

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Y4G

Fractions, Decimals & Percentages:

Add the 2 digits in each separate answer for your code.

$\frac{4}{6}$ of 54

$\frac{2}{3}$ of 27

$\frac{4}{9}$ of 72

$\frac{3}{4}$ of 44

Number Stacks
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Y4H

Number & Place Value

Add all four answers to get your code.

Round 2509 to the nearest thousand

Round 1306 to the nearest ten

Round 499 to the nearest thousand

Round 2151 to the nearest hundred

Y4H

Addition & Subtraction:

The smallest answer will be your code.

2703 - 1361

3004 - 1625

5400 - 4059

3060 - 1674

Y4H

Multiplication & Division:

Use the four separate answers as your code.

(15 x 3) ÷ 9

(3 x 12) ÷ 4

(14 x 4) ÷ 8

(6 x 8) ÷ 12

Y4H

Fractions, Decimals & Percentages:

Add the 2 digits in each separate answer for the code.

2.4 + 1.8

6.3 - 4.9

4.7 + 2.3

9.3 - 6.9

Y4I

Number & Place Value

The answer will be your code.

Start at 1029...

Add 1, subtract 100, subtract 10, add 1,

add 1000, subtract 100, add 1, subtract 10,

add 1000, subtract 10

Y4I

Addition & Subtraction:

Add all four answers to get your code.

23.59 - 14.36

16.03 + 21.85

19.70 - 5.64

6.84 + 15.7

Y4I

Multiplication & Division:

Add the four answers together to get your code.

244 x 6

381 x 7

407 x 4

1285 x 3

Y4I

Fractions, Decimals & Percentages:

Add the 2 digits in each separate answer for your code.

$\frac{3}{4}$ of 32

$\frac{4}{7}$ of 56

$\frac{2}{5}$ of 80

$\frac{5}{6}$ of 42

Number & Place Value

I am a 4-digit number.

All my digits are even.

My ones digit is in the three times table.

My thousands and tens digits add up to 16.

My hundreds digit is my smallest.

All my digits add up to 24

Addition & Subtraction:

Add all four answers to get your code.

Calculate the change from £10 if I buy….

A book for £4.99

A game for £3.50

3 drinks for £1.50 each and popcorn for 90p

4 packs of sweets for 75p each

Multiplication & Division:

Use the remainders as your code.

$$38 \div 4$$

$$47 \div 6$$

$$75 \div 8$$

$$70 \div 9$$

Fractions, Decimals & Percentages:

Find the missing digits to get your code.

$$\frac{1}{5} = \frac{?}{25}$$

$$\frac{?}{4} = \frac{16}{32}$$

$$\frac{2}{7} = \frac{?}{28}$$

$$\frac{3}{?} = \frac{18}{42}$$

Puzzle Box Solutions

YEAR 4	Number & Place Value	Addition & Subtraction	Multiplication & Division	Fractions, Decimals & Percentages
Set A	1873	6698	2332	9868
Set B	4021	1408	5724	5638
Set C	3858	3112	3183	4691
Set D	8940	5843	9200	6368
Set E	1779	1528	3365	3767
Set F	8909	1410	3105	3853
Set G	7452	4366	5347	9956
Set H	6510	1341	5974	6576
Set I	2802	8371	9614	6558
Set J	8286	2311	2537	5287

Number Stacks