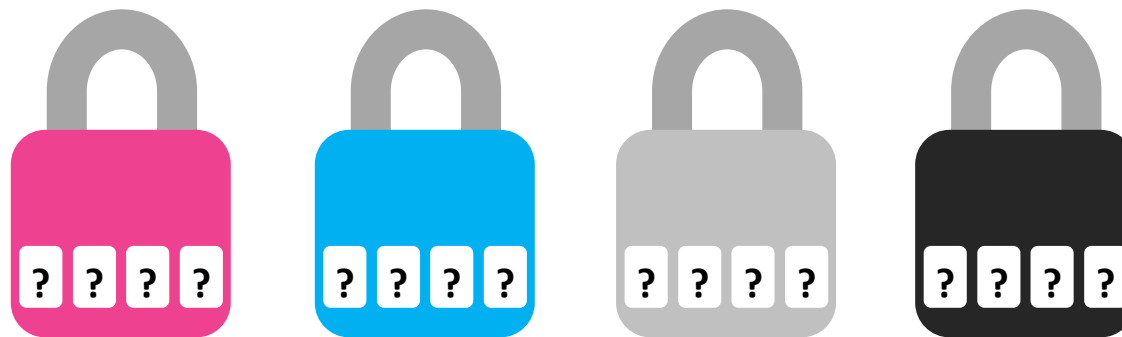




# Puzzle Box Challenges



*Year 3*

# INSTRUCTIONS

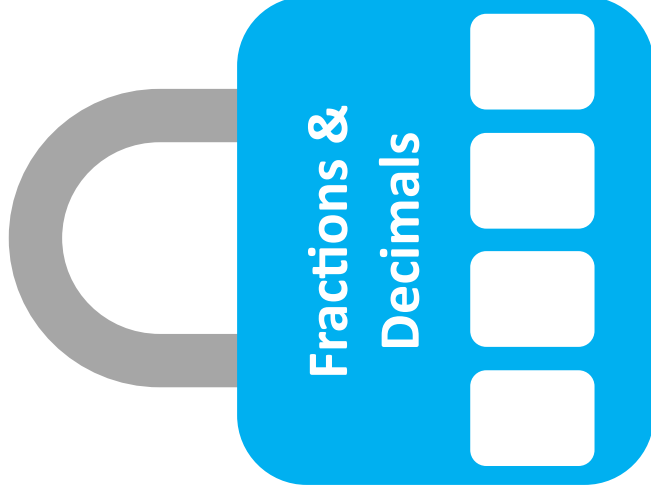
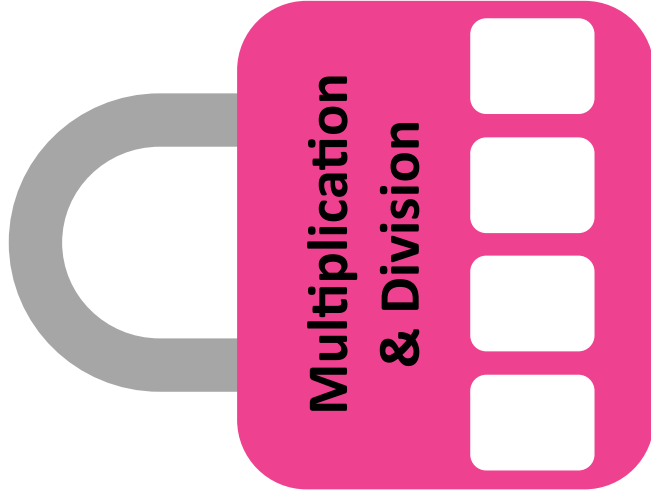
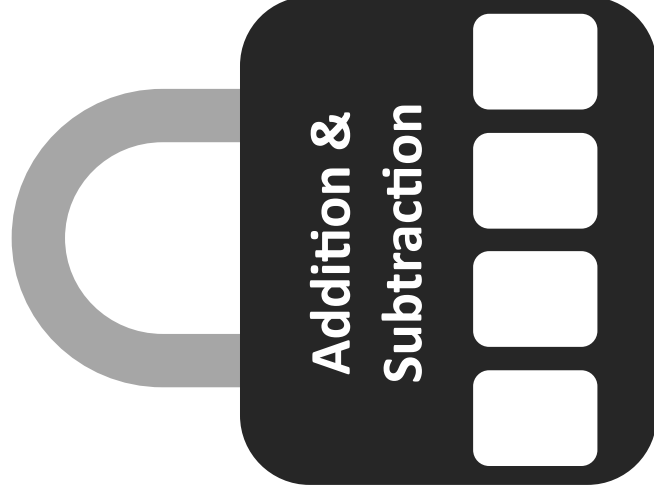
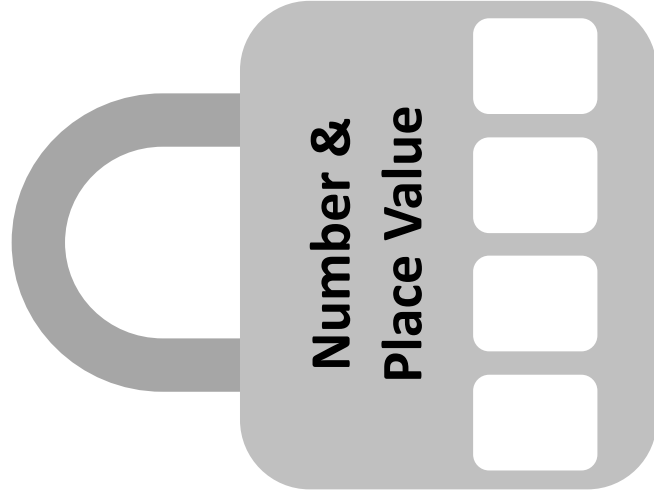
Number Stacks Puzzle Box Challenges are designed to help children practise the fluency skills they have learnt across different areas of maths. Challenges can be completed either with or without using practical resources depending on the children's level of confidence.

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**

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Y3A

### Number & Place Value

I am a 4 digit number.

Only my tens digit is even.

My thousands and ones digits add up to 4.

My hundreds digit is my highest & my ones the lowest.

My hundreds digit is three times the thousand digit.

All my digits add up to 17.



Y3A

### Addition & Subtraction:

The largest answer will be your code.

$$586 + 737$$

$$491 + 860$$

$$517 + 838$$

$$739 + 593$$



Y3A

### Multiplication & Division:

Add both digits in each separate answer for your code.

$$4 \times 8$$

$$7 \times 3$$

$$9 \times 5$$

$$4 \times 6$$



Y3A

### Fractions, Decimals & Percentages:

The four separate answers will make your code

$$\frac{1}{4} \text{ of } 32$$

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

$$\frac{1}{5} \text{ of } 30$$

$$\frac{1}{4} \text{ of } 24$$



Y3B

### Number & Place Value

The answer will be your code.

Start at 2391...

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



Y3B

### Addition & Subtraction:

Add the digits in each separate answer for your code.

$$35 + 28$$

$$16 + 35$$

$$95 - 52$$

$$63 - 37$$



Y3B

### Multiplication & Division:

Add the digits in each separate answer for your code.

$$3 \times 6$$

$$9 \times 4$$

$$5 \times 5$$

$$8 \times 3$$



Y3B

### Fractions, Decimals & Percentages:

Add the digits in each separate answer for your code.

$$\frac{3}{4} \text{ of } 20$$

$$\frac{2}{5} \text{ of } 35$$

$$\frac{2}{3} \text{ of } 24$$

$$\frac{4}{5} \text{ of } 25$$



Y3C

### Number & Place Value

Add all four missing numbers to find your code.

$$9086 = 6 + 9000 + ?$$

$$200 + 3000 + ? + 50 = 3254$$

$$3605 = 5 + 600 + ?$$

$$4 + 2000 + ? = 2704$$



Y3C

### Addition & Subtraction:

The smallest answer will be your code.

$$3796 - 2471$$

$$3748 - 2451$$

$$5098 - 3782$$

$$5545 - 4256$$



Y3C

### Multiplication & Division:

The four answers will give you your code.

$$36 \div 4$$

$$40 \div 5$$

$$18 \div 3$$

$$28 \div 4$$



Y3C

### Fractions, Decimals & Percentages:

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

$$0.5 + 0.7$$

$$0.9 + 0.6$$

$$1.8 + 1.4$$

$$2.7 + 1.5$$



Y3D

### Number & Place Value

I am a 4-digit odd number with 2 even digits.

My tens and ones digits add up to 10.

My thousands and hundreds digits also add up to 10.

All my digits are different.

My thousands and tens digits add up to 15.

My thousands digit is my highest.



Y3D

### Addition & Subtraction:

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

$$53 - ? = 21$$

$$? + 27 = 62$$

$$42 = 19 + ?$$

$$21 = ? - 23$$



Y3D

### Multiplication & Division:

Add the digits in each separate answer for your code.

$$42 \div 3$$

$$65 \div 5$$

$$60 \div 4$$

$$48 \div 3$$



Y3D

### Fractions, Decimals & Percentages:

Add the digits in each separate answer for your code.

$$\frac{3}{4} \text{ of } 36$$

$$\frac{3}{5} \text{ of } 35$$

$$\frac{2}{3} \text{ of } 36$$

$$\frac{4}{5} \text{ of } 55$$



Y3E

### Number & Place Value

Add all four missing numbers to find your code.

$$4902 = 2 + 4000 + ?$$

$$200 + ? + 50 = 5250$$

$$6030 = 6000 + ?$$

$$2222 = 20 + 2000 + 200 + ?$$



Y3E

### Addition & Subtraction:

The largest answer will be your code.

$$6197 - 2584$$

$$2753 + 878$$

$$2592 + 1037$$

$$4728 - 1099$$



Y3E

### Multiplication & Division:

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

$$27 \times 3$$

$$32 \times 5$$

$$26 \times 4$$

$$18 \times 3$$



Y3E

### Fractions, Decimals & Percentages:

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

$$0.9 - 0.5$$

$$1.3 - 0.6$$

$$2.6 - 0.9$$

$$3.2 - 1.4$$





Y3F

### Number & Place Value

The answer will be your code.

Start at 2028...

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



Y3F

### Addition & Subtraction:

Add the digits in each separate answer for your code.

$$26 + ? = 57$$

$$? - 43 = 18$$

$$25 = 57 - ?$$

$$86 = ? + 32$$



Y3F

### Multiplication & Division:

The four answers will make your code.

$$36 \div 4$$

$$24 \div 3$$

$$40 \div 5$$

$$24 \div 4$$



Y3F

### Fractions, Decimals & Percentages:

Add the digits in each separate answer for your code.

$$\frac{2}{5} \text{ of } 45$$

$$\frac{2}{3} \text{ of } 24$$

$$\frac{3}{4} \text{ of } 16$$

$$\frac{5}{6} \text{ of } 30$$



Y3G

### Number & Place Value

I am a 4-digit odd number .

All my digits are odd.

Only my hundreds and tens digits are the same.

My tens and ones digits add up to 6.

My thousands digit is the highest and ones the lowest.

All my digits add up to 18.



Y3G

### Addition & Subtraction:

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

Find the total of 33 and 29

What is the difference between 24 and 40?

How many more is 32 than 21?

What is 9 more than 17?



Y3G

### Multiplication & Division:

Add the digits in each separate answer for your code.

$$32 \times 5$$

$$24 \times 3$$

$$27 \times 4$$

$$34 \times 3$$



Y3G

### Fractions, Decimals & Percentages:

The four answers will make your code.

$$\frac{1}{4} \text{ of } 32$$

$$\frac{1}{5} \text{ of } 35$$

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

$$\frac{1}{6} \text{ of } 30$$



Y3H

### Number & Place Value

The answer will be your code.

Start at 3391...

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



Y3H

### Addition & Subtraction:

Add the digits in each separate answer for the code.

$$46 + 25$$

$$83 - 29$$

$$171 - 38$$

$$151 + 47$$



Y3H

### Multiplication & Division:

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

$$80 \div 5$$

$$54 \div 3$$

$$68 \div 4$$

$$45 \div 3$$



Y3H

### Fractions, Decimals & Percentages:

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

$$1.6 + 0.8$$

$$1.8 + 1.5$$

$$2.6 + 3.4$$

$$1.3 + 1.6 + 2.5$$



Y3I

### Number & Place Value

Add the missing numbers together to get your code.

$$7423 = 7000 + ? + 20 + 3$$

$$300 + 8000 + ? = 8360$$

$$9206 = 200 + 6 + ?$$

$$5055 = 50 + ? + 5000$$



Y3I

### Addition & Subtraction:

The biggest answer will be your code.

$$3168 + 2471$$

$$7426 - 1784$$

$$1627 + 4008$$

$$6396 - 751$$



Y3I

### Multiplication & Division:

Add the digits in each separate answer for your code.

$$4 \times 9$$

$$5 \times 12$$

$$11 \times 3$$

$$7 \times 5$$



Y3I

### Fractions, Decimals & Percentages:

Add the digits in each separate answer for your code.

$$\frac{4}{5} \text{ of } 25$$

$$\frac{7}{10} \text{ of } 50$$

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

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



Y3J

### Number & Place Value

The answer will be your code.

Start at 5296...

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



Y3J

### Addition & Subtraction:

Add the digits in each separate answer for the code.

What is the difference between 87 and 45?

What is 17, 21 and 25 altogether?

Find the sum of 43 and 37

Subtract 87 from 141



Y3J

### Multiplication & Division:

The four answers will make your code.

$$45 \div 5$$

$$28 \div 4$$

$$21 \div 3$$

$$32 \div 4$$



Y3J

### Fractions, Decimals & Percentages:

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

$$0.7 + 0.9$$

$$1.8 - 0.5$$

$$3.9 + 2.4$$

$$4.4 - 2.9$$



# Puzzle Box Solutions

<b>YEAR 3</b>	<b>Number &amp; Place Value</b>	<b>Addition &amp; Subtraction</b>	<b>Multiplication &amp; Division</b>	<b>Fractions, Decimals &amp; Percentages</b>
<i>Set A</i>	3941	1355	5396	8966
<i>Set B</i>	2607	9678	9976	6572
<i>Set C</i>	3784	1289	9867	3656
<i>Set D</i>	8273	5858	5467	9368
<i>Set E</i>	5932	3631	9759	4789
<i>Set F</i>	2711	4759	9886	9737
<i>Set G</i>	7551	8728	7993	8795
<i>Set H</i>	4118	8975	7986	6669
<i>Set I</i>	9465	5645	9668	2868
<i>Set J</i>	5910	6989	9778	7496

