

Quick Practice – Maths

Addition and Subtraction

Learning objectives:

Year 1: Pupils should be taught to:

- Read, write and interpret mathematical statements involving addition (+) and subtraction (-) and equals (=) signs.
- Represent and use number bonds and related subtraction facts within 20.
- Add and subtract one-digit and two-digit numbers to 20, including zero.
- Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = _ - 9$.

Year 2: Pupils should be taught to:

- Solve problems with addition and subtraction:
 - Using concrete objects and pictorial representations, including those involving numbers, quantities and measures.
 - Applying their increasing knowledge of mental and written methods.
- Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.
- Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
 - A two-digit number and ones.
 - A two-digit number and tens.
 - Two two-digit numbers.
- Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.
- Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.

Year 3: Pupils should be taught to:

- Add and subtract numbers mentally, including:
 - A three-digit number and ones.
 - A three-digit number and tens.
 - A three-digit number and hundreds.
- Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.
- Estimate the answer to a calculation and use inverse operations to check answers.
- Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.

Year 4: Pupils should be taught to:

- Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.
- Estimate and use inverse operations to check answers to a calculation.
- Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.

Year 5: Pupils should be taught to:

- Add and subtract whole numbers with more than 4 digits, including formal written methods (columnar addition and subtraction).
- Add and subtract numbers mentally with increasingly large numbers.
- Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.
- Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
- Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.

Year 6: Pupils should be taught to:

- Perform mental calculations, including with mixed operations and large numbers.
- Use their knowledge of the order of operations to carry out calculations involving the four operations.
- Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
- Solve problems involving addition, subtraction, multiplication and division.
- Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

Year 1 – Activity 1

Can you practise your addition and subtraction up to 10?

What you will need:

- 2 dice (0-10)
- Dice with + and - on
- The grid below

How to play:

- Roll the dice and write the numbers in the number rolled columns.
- Roll the add or subtract dice and write the symbol (+ or -).
- Work out the answer.

	First number rolled	Add (+) or subtract (-)	Second number rolled	Equals	Answer
1.				=	
2.				=	
3.				=	
4.				=	
5.				=	
6.				=	
7.				=	
8.				=	
9.				=	
10.				=	

Year 1 – Activity 1

Can you practise your addition and subtraction up to 20?

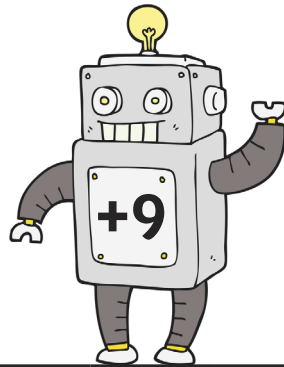
Find the missing number in each problem using your addition and subtraction skills.

8	+		=	10
9	+		=	10
	+	11	=	14
	+	15	=	20
8	+		=	16
20	=		+	11
14	=	7	+	
	=	19	+	1
12	=		+	9
15	=		+	5
9	-	2	=	
7	-	3	=	
12	-		=	8
	-	9	=	11
15	-	5	=	
20	=	20	-	
	=	10	-	9
	=	9	-	4
11	=		-	3
12	=		-	5

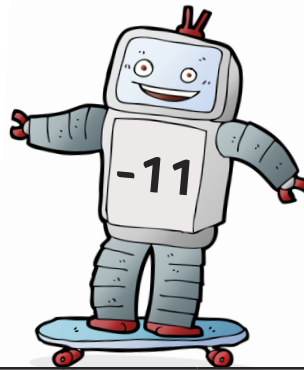
Year 2 – Activity 1

Can you use the function box to work out the answers?

Look at the robot and the 'rule'. Can you work out what the answers will be if you put different numbers in the robot? What answer will come out?



In	9	21	35	18	1	23	17	41	2	13
Out	18									



In	22	50	35	16	33	21	44	19	11	46
Out	11									

Year 2 – Activity 2

Can you use related addition and subtraction facts up to 100?

Look at the two tables below. What do you notice?

3	+	7	=	10
10	-	7	=	3
7	=	10	-	3
3	=	10	-	7

30	+	70	=	100
100	-	70	=	30
70	=	100	-	30
30	=	100	-	70

Now complete the following tables. How quickly can you solve these?

What do you notice about the patterns?

2	+	----	=	10
10	-	2	=	----
8	=	10	-	----
2	=	----	-	8

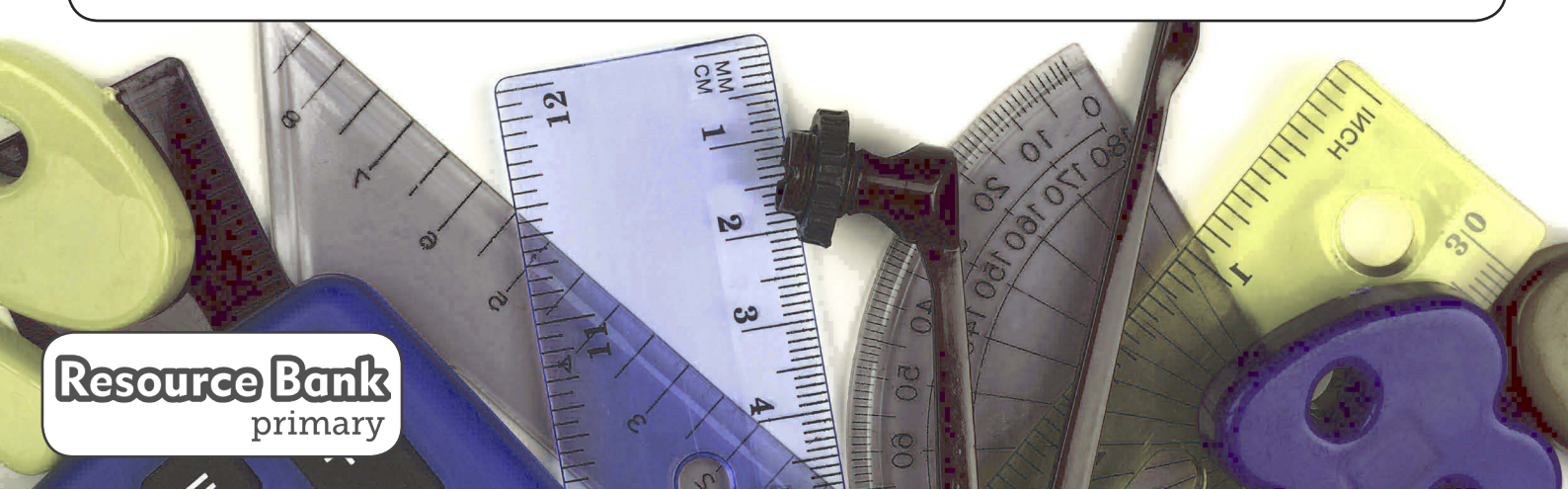
20	+	----	=	100
100	-	20	=	----
80	=	100	-	----
20	=	----	-	80

50	+	----	=	100
50	=	100	-	----
100	-	----	=	50
0	=	----	-	----

5	+	----	=	10
5	=	10	-	----
10	-	----	=	5
0	=	----	-	----

40	+	----	=	100
4	+	----	=	10
100	-	40	=	----
10	-	4	=	----

60	=	----	-	40
6	=	----	-	4
40	=	100	-	----
4	=	10	-	----



Year 3 – Activity 1

Can you make totals as near to 100 as possible?

What you will need:

- 3 dice (0-9)

How to play:

- Throw all three dice, or if you only have one dice, roll it three times.
- Put the numbers together to make a 3-digit number. For example, if you roll **4**, **2** and **0**, you could make **420** or **402**. Think about the order carefully. Can you have **042** or **024**?
- Now roll two more times, and put the numbers together to make a 2-digit number.
- Now you need to decide whether to add the numbers together or subtract them. The aim is to get an answer as close to 100 as possible.
- Can you make 100 exactly using your addition and subtraction skills?

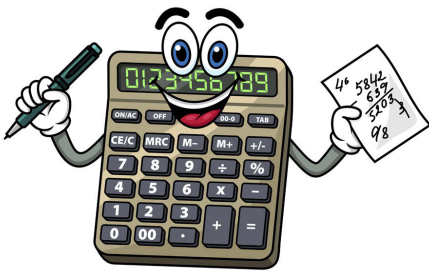
3-digit number created	2-digit number created	Addition or subtraction	Total



Year 3 – Activity 2

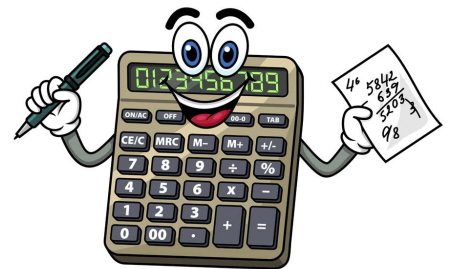
Can you use your addition and subtraction skills to complete the grids?

How quickly can you complete the grids using your addition and subtraction skills? Can you get quicker? (The first one has been done for you.)



+	18	51	43	65	27
29	47				
31					
100					
55					
71					

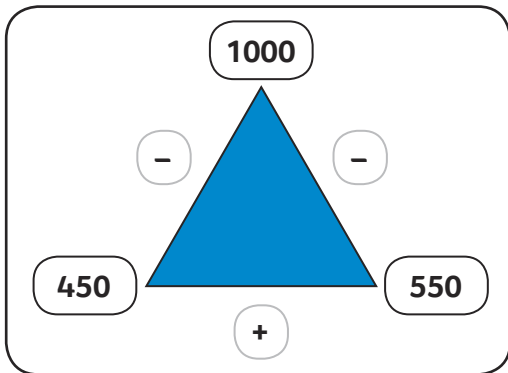
-	100	85	61	49	35
19	81				
21					
9					
35					
27					



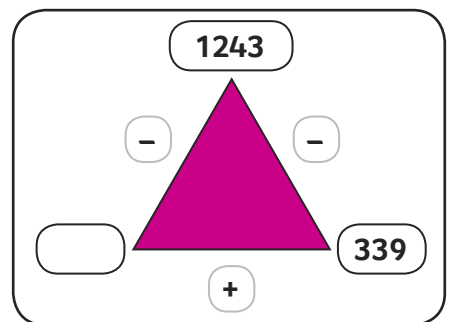
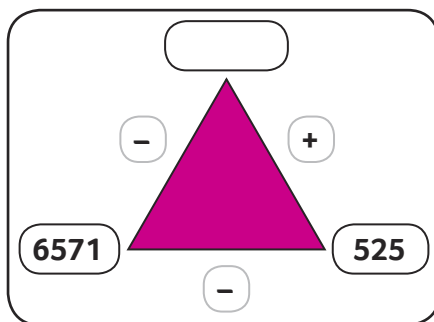
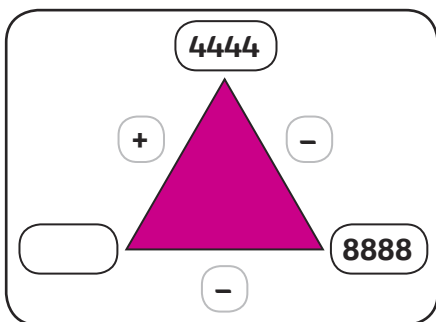
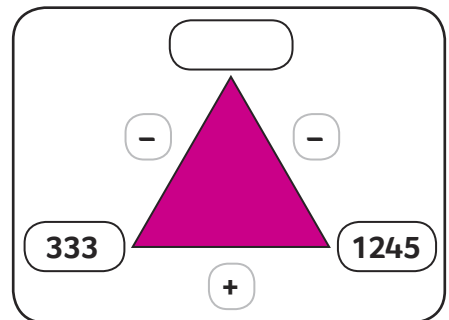
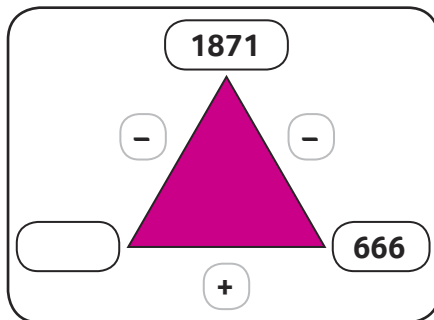
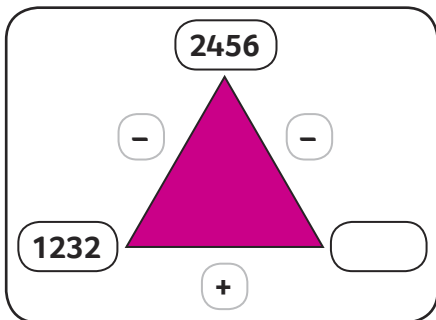
Year 4 – Activity 1

Can you use inverses to solve addition and subtraction problems?

Look at the example and then find the missing numbers in the triangles below.



- | | |
|--------------------|--------------------|
| $1000 - 450 = 550$ | $450 = 1000 - 550$ |
| $1000 - 550 = 450$ | $550 = 1000 - 450$ |
| $450 + 550 = 1000$ | $1000 = 450 + 550$ |
| $550 + 450 = 1000$ | $1000 = 550 + 450$ |



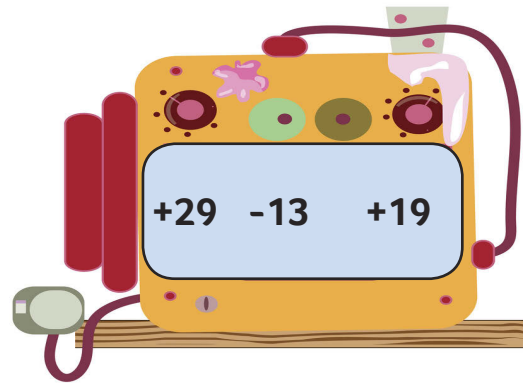
Year 4 – Activity 2

Can you use your addition and subtraction skills to solve these function machines?

If these numbers go into the function machine, what will come out? Fill in the grid for each machine.

22 163 333 121

34 2345 99 190



In	22	163	333	190	34	99	121	2345	2	13
Out										

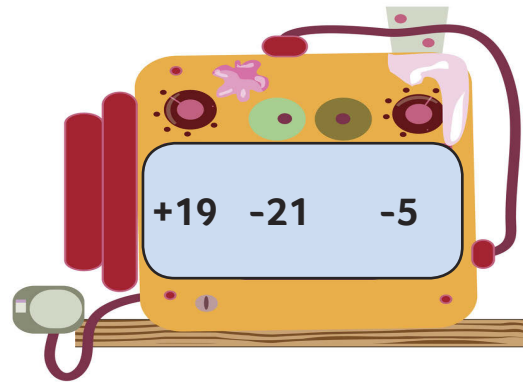
24 31 101

11 55

34 21

68 99

46



In	24	34	31	99	101	55	68	21	11	46
Out										

Year 5 – Activity 1

Can you solve Roman numeral calculations?

I = 1

IV = 4

V = 5

IX = 9

X = 10

XX = 20

XL = 40

L = 50

LX = 60

LXX = 70

XC = 90

C = 100

D = 500

M = 1000

1. CXXI + XXVI =
2. XXXVIII + LV =
3. LXV + XXXI =
4. XXXII + CLI =

5. LXXI + LIV =
6. CCXXV + XXXV =
7. XXII + XIX =
8. XCII + XXXV =

Now add all the Roman numerals in the grid. Try to come up with totals for each column and row.

XI	IX	VIII	IV	I	V	
XL	L	XX	XXX	IV	VI	
XVI	XVII	XIX	XXIX	XXVIII	XVIII	
XXXI	XXV	XXXVI	XXVI	CXII	LX	
LXXV	X	DCLX	LXX	XXV	XLV	
VII	XLV	XXI	CC	II	MCD	
CM	CDLX	D	MMM	DD	CX	
C	M	XC	CC	CD	MM	

Year 5 – Activity 2

Can you make totals as near to 1000 as possible?

What you will need:

- 5 dice (0-9)

How to play:

- Throw all five dice, or if you only have one dice, roll it five times.
- Put the numbers together to make a 5-digit number. For example, if you roll **1, 0, 5, 5** and **0**, you could make **10,550** or **51,050**. Think about the order carefully. Can you have **00155** or **01055**?
- Now roll two or three more times, and put the numbers together to make a 2-digit or 3-digit number.
- Now you need to decide whether to add the numbers together or subtract them. The aim is to get an answer as close to 1000 as possible.
- Can you make 1000 exactly using your addition and subtraction skills?

5-digit number created	2-digit or 3-digit number created	Addition or subtraction	Total



Year 6 – Activity 1

Can you solve decimal calculations using addition and subtraction?

How quickly can you solve these decimal calculations?

Part A	Part B	Part C
1) $5.2 + 4.5 =$	1) $3.33 + 4.44 =$	1) $3.33 + 3.3 =$
2) $8.1 + 4.3 =$	2) $15.55 - 11.43 =$	2) $45.4 + 34.45 =$
3) $37.5 - 5.5 =$	3) $23.44 + 55.91 =$	3) $16.34 - 11.04 =$
4) $12.6 + 14.3 =$	4) $24.34 - 12.33 =$	4) $234.04 - 233.4 =$
5) $25.7 + 34.6 =$	5) $45.66 + 45.66 =$	5) $2345.56 + 23.4 =$
6) $56.9 - 34.9 =$	6) $234.55 - 123.66 =$	6) $99.99 + 99.909 =$
7) $123.9 + 234.5 =$	7) $444.55 - 443.65 =$	7) $1234.56 - 123.6 =$
8) $234.5 + 333.3 =$	8) $4567.34 + 456.33 =$	8) $345.456 - 34.34 =$
9) $455.6 + 777.7 =$	9) $2345.33 + 1234.66 =$	9) $1.234 - 1.023 =$
10) $4567.8 - 2345.7 =$	10) $2345.12 - 232.33 =$	10) $303.03 - 33.30 =$

Year 6 – Activity 2

Can you use all four operations to reach a given total?

What you will need:

- Dice (0-9)
- Pencil and paper
- Timer

How to play:

- Roll the 0-9 dice to create your first 1-digit number. Repeat two more times to get three different 1-digit numbers.
- Roll the 0-9 dice twice to create a 2-digit number. Repeat once more to get two different 2-digit numbers, e.g. 50.
- Roll the 0-9 dice three times to create a 3-digit number, e.g. 125.
- Roll the dice four times to create your 4-digit TARGET number. This is the total you need to try and get to. (Can you get it exactly?)
- Set the timer for five minutes.
- Try to achieve the TARGET number using all four operations, \times $+$ $-$ and \div . You can use each number once and once only.
- The winner is the one who achieves the target number or is the closest.

How to score:

- 10 points for hitting the target number.
- 9 points for being 1 away, 8 for being 2 away etc.