

Y6 & Y7 Number Starters

17.14	67.69	84.07	77.37	99.06	CHANT HENCE DECOY	51	53	55	57	59	Score 206
32.31	38.3	0.94	51.55	82.86		91	93	95	97	99	
88.85	61.7	15.93	86.3	10.2		101	103	105	107	109	
22.63	11.15	13.7	89.8	48.45		111	113	115	117	119	

1	2	3	4	5	6	7	8	9	10	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> $(8 \square 6) \square 9 = 23$ </div> $+$ $-$ \times \div	Number Interactive Starters	4	5	16	9
11	12	13	14	15	16	17	18	19	20			14	11	2	7
21	22	23	24	25	26	27	28	29	30			1	8	13	12
31	32	33	34	35	36	37	38	39	40			15	10	3	6
41	42	43	44	45	46	47	48	49	50			10×6		$120 \div 4$	
51	52	53	54	55	56	57	58	59	60						
61	62	63	64	65	66	67	68	69	70						
71	72	73	74	75	76	77	78	79	80						
81	82	83	84	85	86	87	88	89	90						
91	92	93	94	95	96	97	98	99	100						

4	8	8	25	6	3	Target = 310
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A Spire Maths Activity

<https://spiremaths.co.uk/ia/>

There are 21 Number Interactives: each with three levels. The titles of the interactives are given below. Brief teacher notes are given for each interactive.

Unfortunately flash files will not work on iPads or iPhones.

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Tables' practice

OBJECTIVE(S): Consolidate the rapid recall of multiplication facts to 10 by 10.

DESCRIPTION: Tables' practice at 3 levels. A '4 by 4 square' starter where pupils have to answer 16 random tables-type questions. Timer available. To speed the activity up you can click on the orange cell without entering an answer in the blue cell. Page '4 by 4 grids' accompanies this starter.

Times table practice

Use the keypad to enter your answer in the blue cell.
Click **Check** to see if you are correct.

✓			
			✓

What is 5 x 8?

Answer = Level 1

7	8	9
4	5	6
1	2	3
0	.	(-)
n	+	-
<input type="button" value="Clear"/>		

Pupils can choose any one of 16 cells on a 4 by 4 grid. A question appears of the form $a \times b$ where a and b vary between 1 and 12 inclusive, depending on the level chosen.

Answers can be 'entered' in the blue cell and then checked. To speed up the process the original cell (which turns orange on clicking) can be clicked again to signify a correct (oral) answer. Another cell can then be selected.

The timer can be used to show the total time taken to answer all 16 questions (the timer works even when it is not visible).

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Evaluating expressions

OBJECTIVE(S): Know and use the order of operations, including brackets.

DESCRIPTION: Evaluate simple expressions at 3 levels (differentiated by number size). A '4 by 4 square' starter where pupils have to answer 16 random questions. Timer available. To speed the activity up you can click on the orange cell without entering an answer in the blue cell. Page '4 by 4 grids' accompanies this starter.

Evaluating expressions

Use the keypad to enter your answer in the blue cell.
Click **Check** to see if you are correct.

			✓
	✓		
			✓

What is $(9 + 2) \times 6$?

Answer = Level ↑ 1 ↓

Check

Pen on

7	8	9	^
4	5	6	
1	2	3	
0	.	(-)	
n	+	-	
Clear			

Show timer

Reset

« »

Pupils can choose any one of 16 cells on a 4 by 4 grid. A simple expression with one set of brackets and integers is shown and pupils have to work out its value.

Answers can be 'entered' in the blue cell and then checked. To speed up the process the original cell (which turns orange on clicking) can be clicked again to signify a correct (oral) answer. Another cell can then be selected.

The timer can be used to show the total time taken to answer all 16 questions (the timer works even if it is not visible).

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Number complements

OBJECTIVE(S): Consolidate the rapid recall of number facts of positive integer complements to 100.

DESCRIPTION: A 20-card matching starter where pupils have to pair number complements at 3 levels. Level 1 is integers adding to 100; level 2 is decimals adding to 1 and level 3 is decimals adding to 100.

Number complements

Click the 'partner' number.

Pen on

	53	13	92	55
39	73	8	47	34
66	23	45	90	77
87		61	10	27

Level 1

New
Repeat
Show timer
Reset

« »

Pupils choose two cards on a 4 by 5 grid. There are ten pairs of numbers that add up to a given total according to the level. Click Repeat to use the same numbers again, but the cards will be shuffled.

The timer can be used to show the total time taken to find the 10 pairs (the timer works even when it is not visible).

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Directed numbers

OBJECTIVE(S):

Add and subtract positive and negative integers.

DESCRIPTION:

Pupils are shown 9 directed number sums (addition and subtraction only) with their corresponding answers. They have to match the sum with the correct answer. A '9 pair card matching' starter with 3 levels (differentiated by number size).

Directed numbers

Each card on the left shows a calculation.
Each card on the right shows an answer to a calculation.
Match each card on the left with the correct card on the right.

$-9 - -1$
$+6 + +3$
$+9 + -1$
$+6 + -3$
$+9 + +1$
$-9 - +1$
$-6 - +3$
$-6 - -3$

$+10$
$+9$
-9

-8
$+8$
-3

$+3$
-10

It's a match!

Pen on

New

Replay

Reset

<<
>>

Level ↑ 1 ↓

Two sets of 3 by 3 cards are shown on the screen (contents of cards are visible). You can select one card from each side. The left-hand side shows directed number sums (addition and subtraction only), the right-hand side shows the corresponding answers. The object is to match the two sides.

The same cards can be replayed but the positions are changed.

There are 3 levels differentiated by number size.

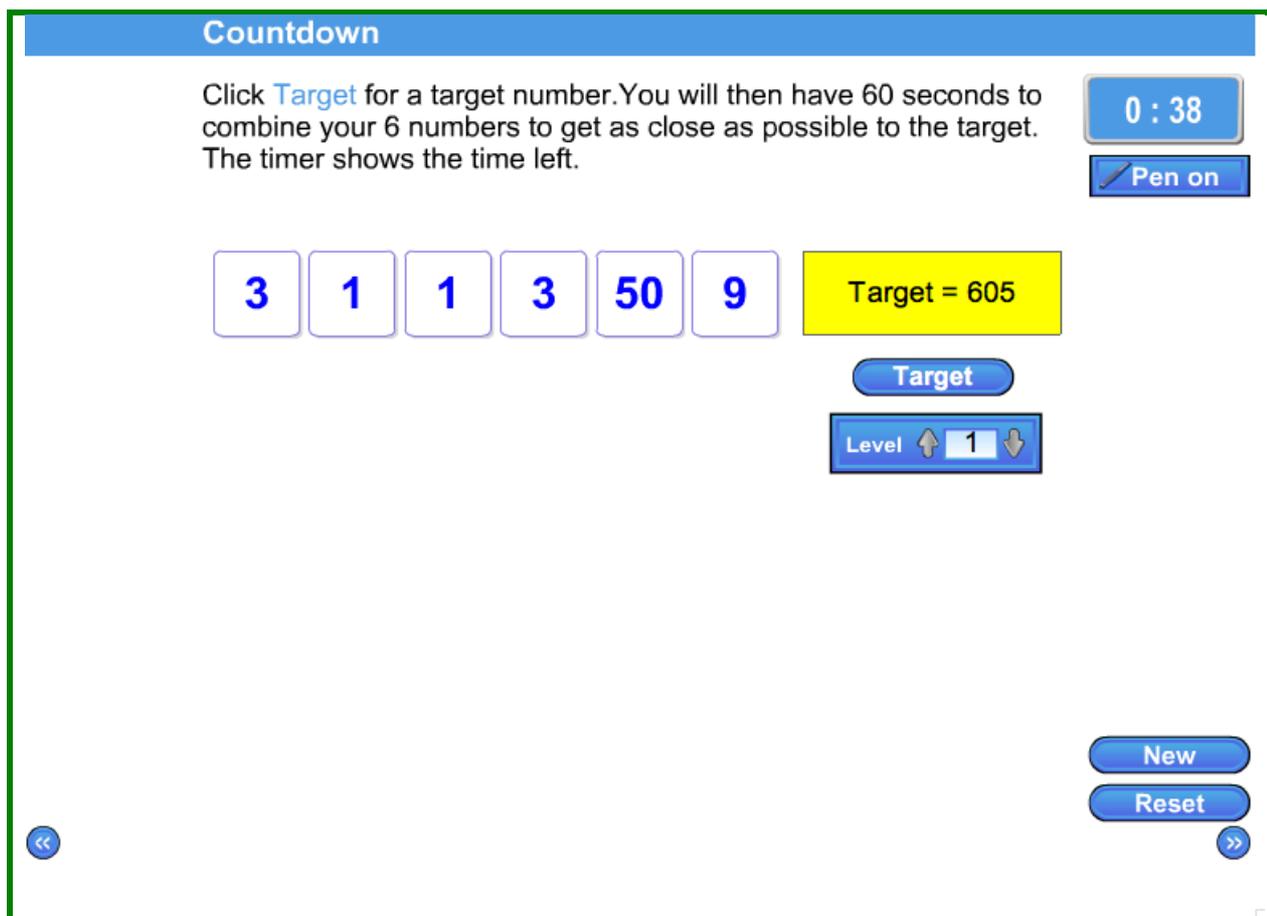
Spire Maths interactive files available in a flash format at: <https://spiremaths.co.uk/ia/>

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Countdown

OBJECTIVE(S): Consolidate and extend mental methods of calculation.

DESCRIPTION: You are given one large number and 5 small numbers and have to make a given total in 60 (Level 1), 45 (L2) and 30 seconds (L3).
The 3 levels are differentiated by the size of numbers used.
One possible solution is shown.



The screenshot shows the Countdown game interface. At the top, a blue header reads "Countdown". Below it, instructions state: "Click **Target** for a target number. You will then have 60 seconds to combine your 6 numbers to get as close as possible to the target. The timer shows the time left." To the right, a timer displays "0 : 38" and a "Pen on" button. The main area contains six number boxes: 3, 1, 1, 3, 50, and 9. A yellow box shows "Target = 605". Below the numbers is a "Target" button and a "Level" selector set to 1. At the bottom right, there are "New" and "Reset" buttons, and a double arrow button at the bottom left.

You are given one large number and 5 small numbers. You have to combine these numbers in some way to get a total shown on the screen. You have 30 seconds to do this and time starts from when you see the total. The last 5 seconds are 'counted down' on the screen and you are then told to stop.

The 3 levels are differentiated by the size of numbers used.

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Doubles and halves

OBJECTIVE(S): Find doubles and halves of numbers.

DESCRIPTION: Find doubles and halves of numbers at 3 levels. A '4 by 4 square' starter where pupils have to answer 16 random tables-type questions. Timer available. To speed the activity up you can click on the orange cell without entering an answer in the blue cell. Page '4 by 4 grids' accompanies this starter.

Doubles and halves

Use the keypad to enter your answer in the blue cell.
Click **Check** to see if you are correct.

Find half of 6.4?

Answer =

Check Level

Pen on

7	8	9	↕
4	5	6	
1	2	3	
0	.	(-)	
n	+	-	
Clear			

Show timer

Reset

⏪ ⏩

Pupils can choose any one of 16 cells on a 4 by 4 grid. A question appears asking pupils to halve or double a number. Three levels are available.

Answers can be 'entered' in the blue cell and then checked. To speed up the process the original cell (which turns orange on clicking) can be clicked again to signify a correct (oral) answer. Another cell can then be selected.

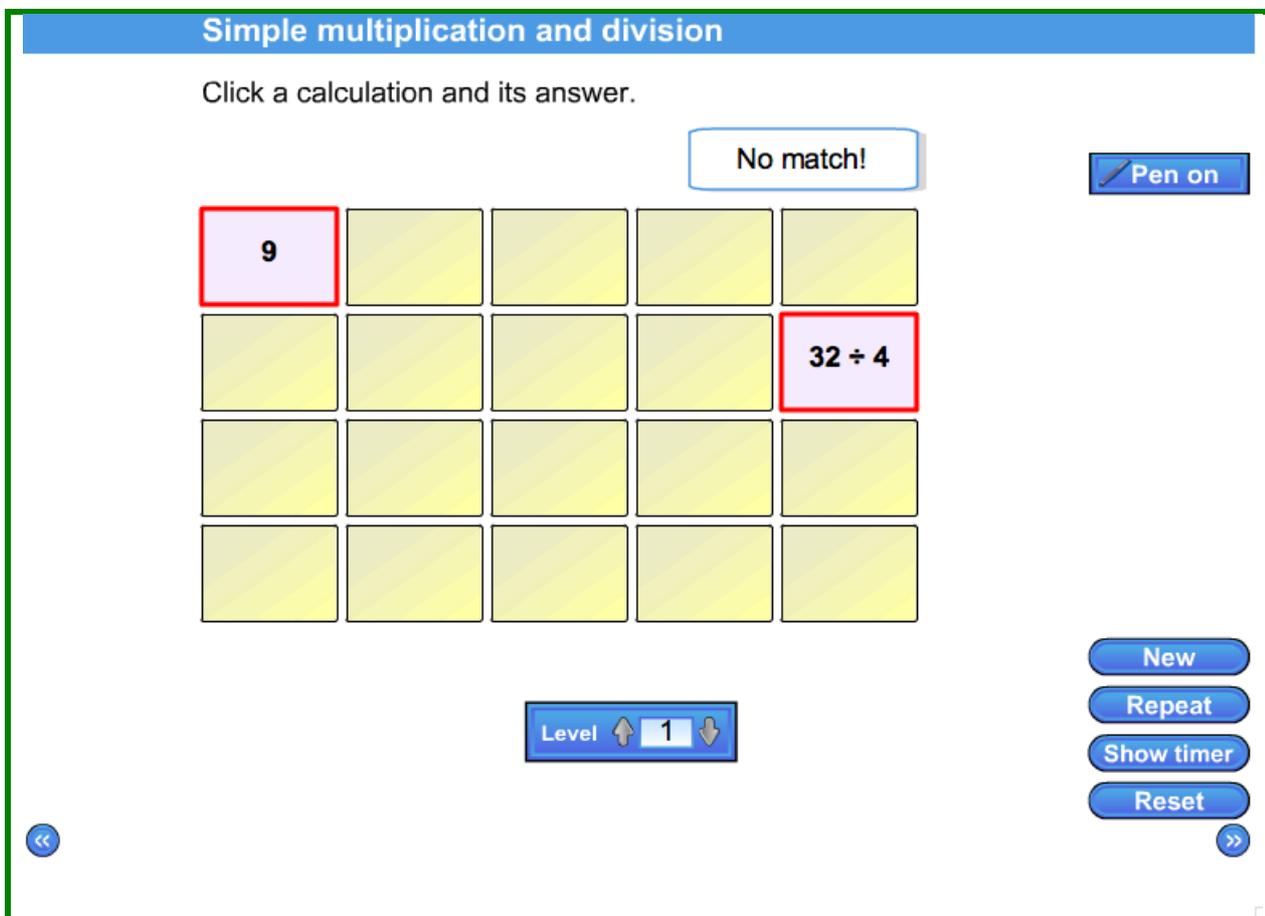
The timer can be used to show the total time taken to answer all 16 questions (the timer works even when it is not visible).

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Simple multiplication and division

OBJECTIVE(S): Consolidate and extend mental methods of calculation.
DESCRIPTION: A '20 card matching' challenge in which pupils are asked to pair simple multiplication and division questions and their solutions.



Ten pairs of simple multiplication and division questions, with their solutions are presented on cards (faces hidden) in a 4 by 5 array. Pupils are invited to click on cards in order to try and find matching pairs. If the questions and solutions correspond then the 'It's a match' message is shown and the cards disappear from the screen. If the selected cards do not correspond then a 'No match' message is shown.

The 3 levels are differentiated by the magnitude of the numbers involved in the questions and their solutions.

The timer can be used (it runs whether shown or hidden) to show the total time taken to find all ten matching pairs.

Spire Maths interactive files available in a flash format at: <https://spiremaths.co.uk/ia/>

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Square Digits

OBJECTIVE(S): Recognise squares of numbers to at least 12 by 12. Consolidate the rapid recall of number facts. Check a result by considering whether it is of the right order of magnitude.

DESCRIPTION: A '9 pair card matching' starter in which pupils are asked to pair numbers with other numbers formed from the sums of the squares of their digits. The 3 levels are differentiated by the magnitude of the numbers involved.

Square digits

The card on the left shows a number. The card on the right shows the digits of the number squared and added together. Match each card on the left with the correct card on the right.

175	136	177	163	13	75
137	199	32	46	99	59
59	86	1	106	1	100

Pen on

Level \uparrow 1 \downarrow

New
Replay
Reset

\ll \gg

Two sets of 3 by 3 cards are shown on the screen (contents of cards are visible). Pupils are invited first to 'Click' a number card from the left-hand array. The aim is to 'Click' a number card from the right-hand array for which the number represents the sum of the squares of the digits of the card from the left-hand array. Pairings can be validated using the 'Check' button. A correct pairing produces the message 'It's a match' and the corresponding cards disappear from the screen. Otherwise the message 'No match' appears and the cards remain. When all cards are successfully paired a 'Match complete' message is displayed. The 'Replay' button allows the same numbers to be used, with cards in a different order.

Spire Maths interactive files available in a flash format at: <https://spiremaths.co.uk/ia/>

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Rounding numbers

OBJECTIVE(S): Round positive whole numbers to the nearest 10, 100 or 1000 and decimals to the nearest whole number.

DESCRIPTION: A '4 by 4 square' starter where pupils have to answer sixteen random rounding questions. Timer available. To speed the activity up you can click on the orange cell without entering an answer in the blue cell.

Rounding numbers

Use the keypad to enter your answer in the blue cell.
Click **Check** to see if you are correct.

	✓		

Round 28.3 to the nearest integer.
Answer =

Check Level 1

Pen on

7	8	9
4	5	6
1	2	3
0	.	(-)
n	+	-
Clear		

Show timer
Reset

⏪ ⏩

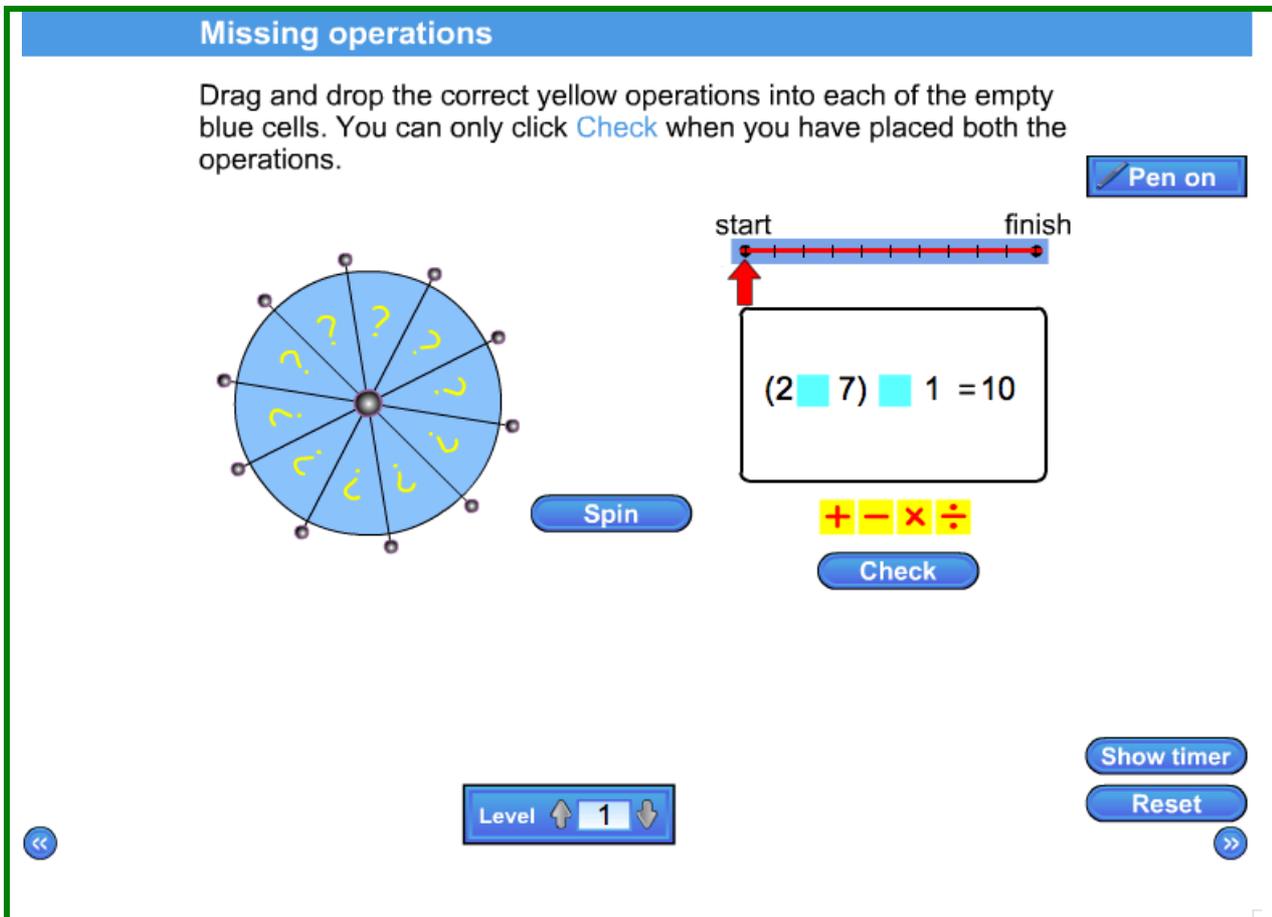
A yellow 4 by 4 grid is presented on the screen. Pupils are invited to click in a cell on the grid to prompt a question on rounding a given number to the nearest integer, 10, 100 or 1000. Pupils' answers are to be entered using keypad entry. Answers can be validated using the 'Check' button. A correct response produces the message 'Correct' and a tick appears in the cell on the grid. Otherwise the message 'Oops. Please try again' appears. To speed up the process the original cell (which turns orange on clicking) can be clicked again to signify a correct (oral) answer. Another cell can then be selected. When all cells are successfully completed the message 'Finished' appears. The timer can be used (it runs whether shown or hidden) to show the total time taken to complete all sixteen questions.

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Missing operations

OBJECTIVE(S): Know and use the order of operations, including brackets.
DESCRIPTION: A 'spin the wheel' starter where, using drag and drop, you are asked to insert operations to complete a number equation. Timer available. The 3 levels are differentiated by the size of numbers involved.



Missing operations

Drag and drop the correct yellow operations into each of the empty blue cells. You can only click **Check** when you have placed both the operations.

Pen on

start finish

(2 [] 7) [] 1 = 10

Spin

+ - × ÷

Check

Show timer

Reset

Level ↑ 1 ↓

A wheel, a working space and tiles of the four operations are presented on the screen. Clicking the spin button produces an incomplete (the operation signs are missing) numerical equation in the working space. You are invited to complete the equation by using drag and drop to move the operations into an appropriate space. A correct solution (which can be verified by clicking 'Check') moves a pointer along a 10-point scale. 10 successive correct solutions produce a 'Congratulations' message.

Incorrect solutions are not verified and corrections have to be made before the spin button is activated and a new equation appears. In some cases more than one solution is possible and these should be discussed with pupils using the pen facility since alternative solutions cannot be addressed using drag and drop.

Spire Maths interactive files available in a flash format at: <https://spiremaths.co.uk/ia/>

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Combining numbers

OBJECTIVE(S):	Understand addition, subtraction, multiplication and division as they apply to whole numbers; know how to use the laws of arithmetic and inverse operations.
DESCRIPTION:	A 'construct and complete' a number equation starter in which numbers are selected from a given array. The 3 levels are differentiated by the magnitude of the array - and the corresponding numbers displayed

Combining numbers

Click the number in the yellow grid that should be placed in the empty orange box.

	-	48	=	35
--	---	----	---	----

Pen on

Score
 $\frac{0}{0}$

Level ↑ 1 ↓

Reset

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

⏪
⏩

Five empty cells, to contain the elements of a number equation, and a rectangular array of numbers is presented on the screen. Pupils are invited to click numbers from the rectangular array. These appear in the empty cells together with an operation sign (plus, minus, multiply or divide) and an equals sign. Pupils are then asked to complete the number equation by clicking a third number from the rectangular array. A correct answer produces a 'Correct' message and a score - showing the proportion of successful responses to attempts - moves on one. Incorrect answers are not verified and a 'Oops. Try again' message appears. There are 3 levels differentiated by the size of the rectangular array: level 1 (10 x 10), level 2 (10 x 12) and level 3 (10 x 15).

Spire Maths interactive files available in a flash format at: <https://spiremaths.co.uk/ia/>

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Properties of numbers

OBJECTIVE(S): Recognise and use primes less than 100
DESCRIPTION: A 'match the sum' starter in which pupils are asked to find two prime numbers from a given array that sum to a randomly generated number.

Prime sums

A set of odd number cards is shown below. Click two different odd prime numbers that add up to the number in the yellow box. Click a yellow number to de-select it.

Pen on

11	13	15	17	19
21	23	25	27	29
31	33	35	37	39
41	43	45	47	49

Score

72

Level 1

Check

Reset

Reset

Reset

A set of odd numbers is presented on the screen arranged in a 4 by 5 array. In addition, a further number in a yellow cell is shown. Pupils are invited to click two prime numbers from the 4 by 5 array which sum to the number in the yellow cell. A correct response prompts the message 'Well done' and a 'thermometer' scale moves up one place along a ten- point scale. Otherwise 'Oops. Try again.' Ten correct responses prompt the message 'Brilliant. Finished.' There are 3 levels differentiated by the magnitude of the numbers involved.

Spire Maths interactive files available in a flash format at: <https://spiremaths.co.uk/ia/>

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Squares and square roots

OBJECTIVE(S): Recognise squares of numbers to at least 12 x 12, and the corresponding roots.

DESCRIPTION: A twenty-card matching challenge in which pupils are asked to pair a number with its square or square root.

The 3 levels are differentiated by the magnitude of the values involved.

Squares and square roots

Here are 10 pairs of squares and square roots.
Click a number and its 'partner' to find all the pairs.

Pen on

Level ↑ 1 ↓

New
Repeat
Show timer
Reset

« »

A 4 x 5 array of cards is presented (faces hidden). Pupils are invited to find each of the 10 matching pairs which show a number and its square/square root. To reveal the numbers pupils 'Click' cards. Revealing a pair prompts an 'It's a match' message and the cards disappear from the screen. When all 10 pairs have been found a 'Match complete' message is shown. It is possible to replay the starter with the same values by using the 'Repeat' button. Otherwise use 'New'.

There are 3 levels differentiated by the magnitude and type of the numbers involved. The timer can be used (it runs whether shown or hidden) to show the total time taken to answer all ten questions.

Spire Maths interactive files available in a flash format at: <https://spiremaths.co.uk/ia/>

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Factors of numbers

OBJECTIVE(S): Recognise and use, factors (divisors)

DESCRIPTION: A 'find the factors' challenge in which pupils highlight in a 10 x 10 grid suggested factors of a given number.
The 3 levels are differentiated by the magnitude of the given number.

Factors of numbers

Find all the factors of the number in the orange box. Click all the factors on the yellow grid, then click **Check**. Click a number again to de-select it.

Too few selected.

Pen on

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

36

Check

Level ↑ 1 ↓

New

Reset

<<
>>

A yellow 10 x 10 grid displaying the numbers from 1 to 100 and an orange cell displaying a number from the grid are presented on the screen. Pupils are invited to click and highlight in the 10 x 10 grid all the factors of the number in the orange cell. A correct and complete set of factors prompts the message 'Well done. All factors found'. Incomplete or inaccurate sets of factors prompt other explanatory messages.

There are 3 levels differentiated by the magnitude of the number under consideration. Level 1 up to 40, level 2 up to 70 and level 3 up to and including 100.

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Properties of Numbers

OBJECTIVE(S): Recognise and use triangular numbers, square numbers, multiples, and primes (less than 100).

DESCRIPTION: A starter where pupils have drag and drop numbers to correspond with descriptions.

Properties of numbers

On the left are eight types of numbers. On the right are eight numbers. Drag and drop each of the eight numbers on the right into the correct grey cell.

Prime under 40		20
None of these		23
Dartboard treble score over 25		64
Prime over 40		26
Square number		39
Triangle number		55
Factor of 1000		12
Multiple of 12		53

Level  1 

Check

Pen on

New

Show timer

Reset

<< >>

Eight statements describing numbers are presented on the left-hand side of the screen. Eight matching numbers (in a different order) are presented on the right-hand side of the screen. Pupils are invited to drag and drop the numbers into grey cells in the centre of the screen to correspond with the eight descriptions.

Answers can be verified using the check button. Correct answers are 'ticked' otherwise 'crossed'. Numbers can be moved again until a correct solution is found.

Spire Maths interactive files available in a flash format at: <https://spiremaths.co.uk/ia/>

Unfortunately they will not work on iPads or iPhones.

Multiplications and divisions

OBJECTIVE(S): Multiply and divide three-digit by two-digit whole numbers.

DESCRIPTION: A '20 card matching' challenge in which pupils are asked to pair multiplication and division questions and their solutions.

Multiplications and divisions

Here are 10 pairs of calculations with their answers.
Click a calculation and its answer to find all the pairs.

Pen on

81	16	42	12×4	15
21	3×27	5×17	41	85
$126 \div 3$	46×6	$126 \div 6$	96	$32 \div 2$
$164 \div 4$	2×48	$75 \div 5$	276	48

Level  1 

New

Repeat

Show timer

Reset



Ten pairs of multiplication and division questions, with their solutions are presented on cards (faces shown) in a 4 by 5 array. Pupils are invited to click on cards in order to try and find matching pairs. If the questions and solutions correspond then the 'It's a match' message is shown and the cards disappear from the screen. If the selected cards do not correspond then a 'No match' message is shown. When all cards have been successfully paired, the 'Match complete.' message is shown. Using the 'Repeat' button allows the same problems and solutions to be used again (in a different arrangement).

The 3 levels are differentiated by the magnitude of the numbers involved in the questions and their solutions.

The timer can be used (it runs whether shown or hidden) to show the total time taken to find all ten matching pairs.

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Code cracking

OBJECTIVE(S): Check a result by considering whether it is of the right order of magnitude.

DESCRIPTION: A '9 pair card matching' starter in which pupils have to find a number representing a word written in a simple code. The 3 levels are differentiated by the length of words and numbers involved.

Code cracking

The card on the left shows a word. The card on the right shows a number. CAT is coded as $3 + 1 + 20 = 24$. Match each card on the left with the correct card on the right.

LOG	BIB	FOX	47	30	35
ROW	SEW	TEN	56	13	39
PIE	DIE	ANT	18	45	34

Pen on
Clue
New
Replay
Reset

Level
↑
1
↓

«
»

Nine pairs of matching cards, in two 3 by 3 arrays, are presented with faces shown. The array on the left-hand side shows words. The array on the right shows numbers, formed from the 'sum' of the words using a simple 'Caesar' cipher where A = 1, B = 2 etc. Pupils are invited to 'Click' a card from the left-hand array and then 'Click' a card from the right-hand array which corresponds with the word written in code. Pairings can be validated using the 'Check' button. A correct pairing produces the message 'It's a match' and the corresponding cards disappear from the screen. When all cards are successfully paired a 'Match complete' message is displayed.

A 'Clue' is available in the form of the alphabet written out, if required. A 'Replay' button allows the starter to be re-run using the same words.

Pupils should be encouraged to discuss the different strategies for finding matching pairs.

Spire Maths interactive files available in a flash format at: <https://spiremaths.co.uk/ia/>

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Consecutive sums

OBJECTIVE(S): Consolidate the rapid recall of number facts

DESCRIPTION: A 'find the consecutive integers' challenge in which pupils highlight in a 10 by 10 grid a suggested set of consecutive integers that sum to a given number.

Consecutive sums

Click 2 consecutive numbers in the yellow grid that add up to the number in the orange cell. Click **Check** when you have your answer. Click a number again to de-select it.

Pen on

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Score
0
0

Check
New
Reset

Level **1**

A yellow 10 by 10 grid displaying the numbers from 1 to 100, with one number highlighted in orange, is presented on the screen. Pupils are invited to click and highlight in the 10 by 10 grid a set of consecutive numbers that sum to the number in the orange cell. A correct and complete set of such integers prompts the message 'Well done.' otherwise 'Oops. Try again.'.

There are 3 levels differentiated by the magnitude of the grid: level 1 to 100, level 2 to 120, level 3 to 150 and the set of consecutive integers requested. At level 3 no help is given and pupils are asked only for a set of consecutive integers to sum to the given number.

Spire Maths interactive files available in a flash format at: <https://spiremaths.co.uk/ia/>

Unfortunately they will not work on iPads or iPhones.

Adding and subtracting numbers and decimals

OBJECTIVE(S): Consolidate and extend mental methods to include decimals; use standard column procedures to add and subtract whole numbers and decimals with up to two places.

DESCRIPTION: Tables' practice at 3 levels. A '4 by 4 square' starter where pupils have to answer 16 random tables-type questions. Timer available. To speed the activity up you can click on the orange cell without entering an answer in the blue cell.

Adding and subtracting numbers and decimals

Use the keypad to enter your answer in the blue cell.
Click **Check** to see if you are correct.

Work out $7.2 - 3.2$

Answer = Level 1

7	8	9	^
4	5	6	
1	2	3	
0	.	(-)	
n	+	-	
<input type="button" value="Clear"/>			

Pupils can choose any one of 16 cells on a 4 by 4 grid. A question appears of the form $a \times b$ where a and b vary between 1 and 12 inclusive, depending on the level chosen. Answers can be 'entered' in the blue cell and then checked. To speed up the process the original cell (which turns orange on clicking) can be clicked again to signify a correct (oral) answer. Another cell can then be selected. The timer can be used to show the total time taken to answer all 16 questions (the timer works even when it is not visible).

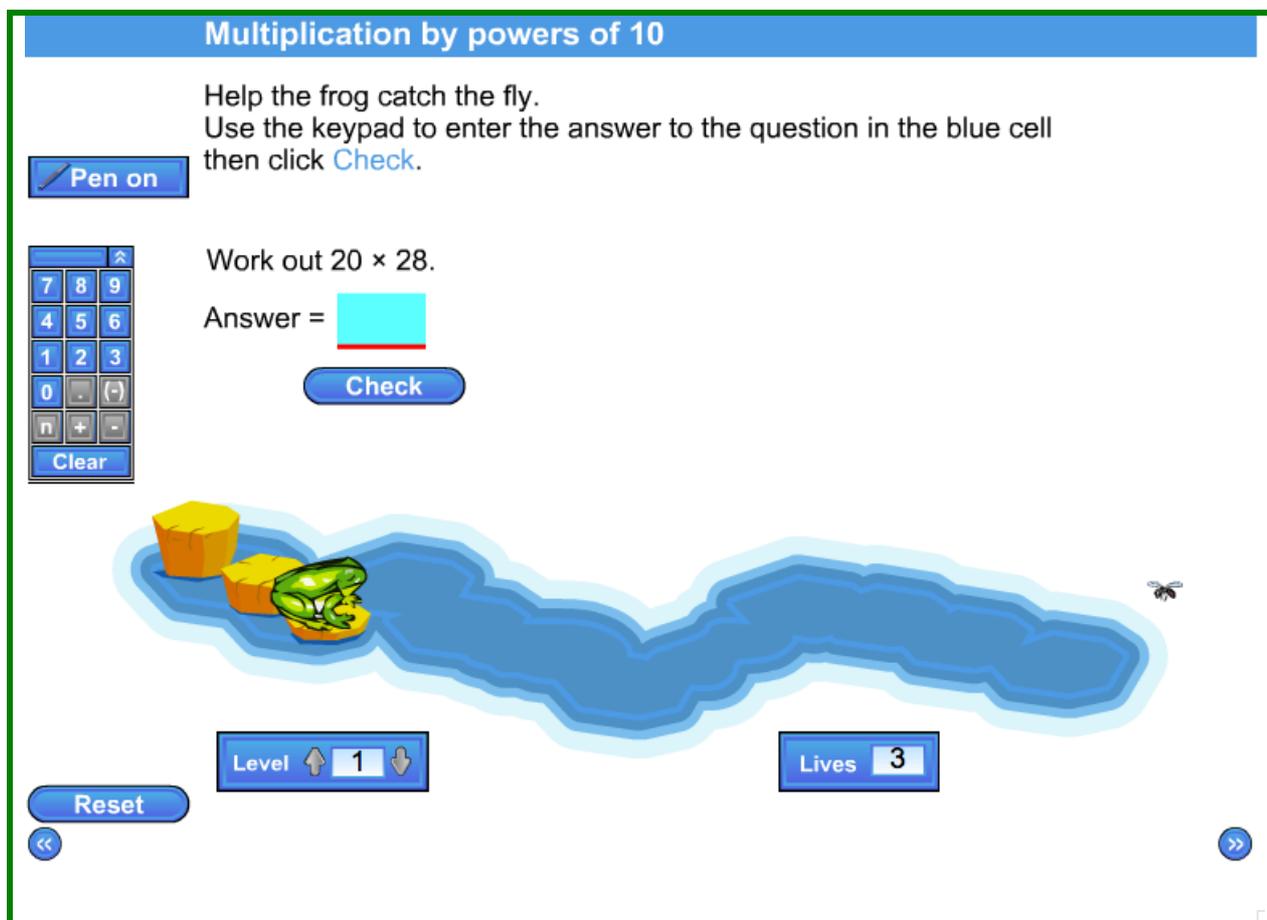
Spire Maths interactive files available in a flash format at: <https://spiremaths.co.uk/ia/>

Unfortunately they will not work on iPads or iPhones.

Multiplication by powers of 10

OBJECTIVE(S): Multiply two-digit whole numbers and multiples of 10

DESCRIPTION: A 'stepping stones' starter where pupils have to 'step' a frog across ten stepping stones by answering correctly questions involving the multiplication of a number by a multiple of 10. They have three lives. The 3 levels are differentiated by the magnitude of the values involved.



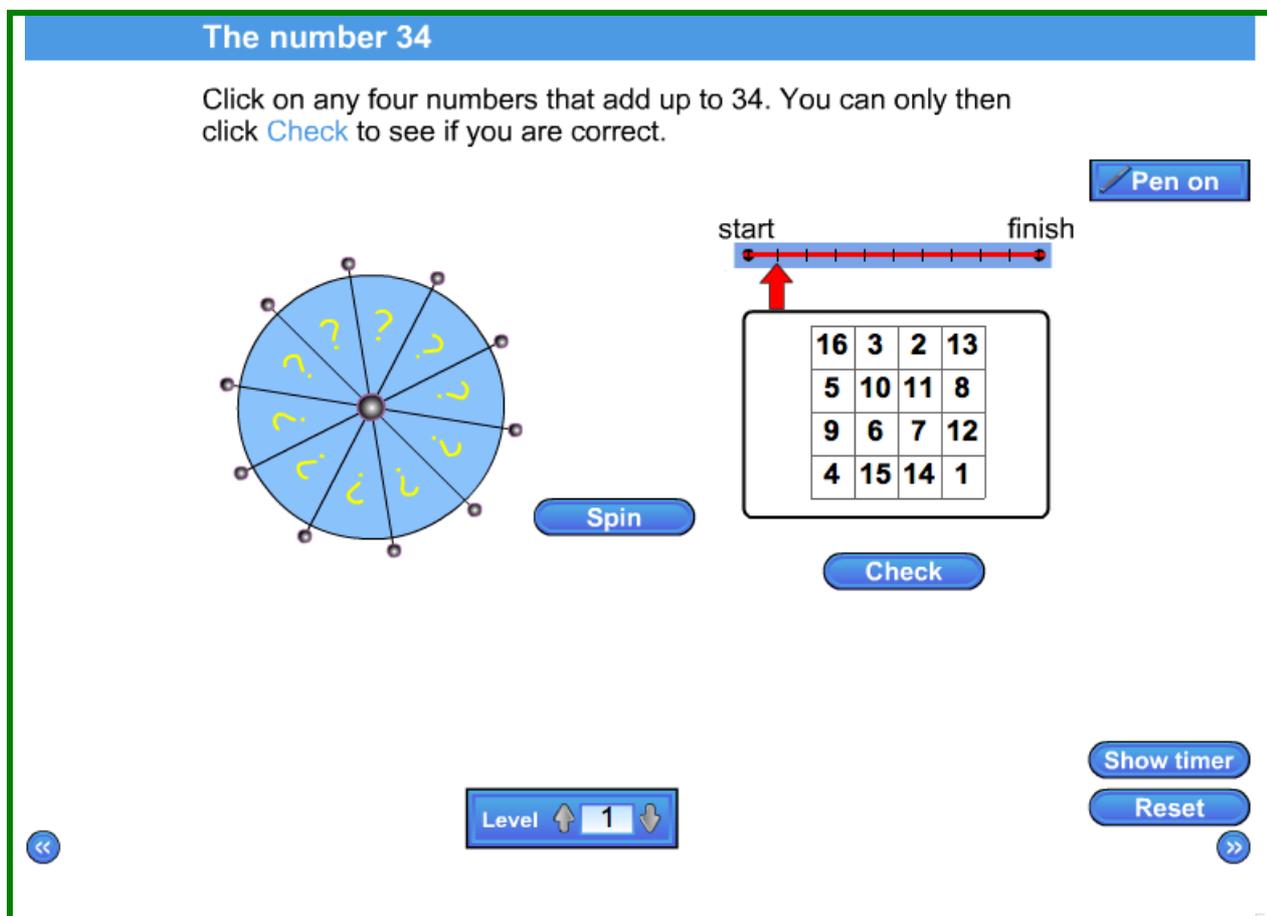
A multiplication question and response cell are presented on the screen. In the multiplication sum at least one of the numbers is a multiple of 10 less than 100. Pupils are invited to enter the product of the multiplication in the cell using the keypad for entry. A correct response is confirmed with a tick when the 'Check' button is used and the frog moves to the next stepping stone (there are 10 in all). If they get it wrong they lose a life (they have 3 lives). On crossing all stepping stones the frog eats a fly. The 3 levels are differentiated by the magnitude of the numbers in the question.

Spire Maths interactive files available in a flash format at: <https://spiremaths.co.uk/ia/>

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The number 34

OBJECTIVE(S): Consolidate mental methods of calculation.
DESCRIPTION: A four by four grid of numbers is presented. Pupils have to click to highlight four numbers which sum to 34. Timer available. The three levels are differentiated by the arrangement of correct possibilities.



The number 34

Click on any four numbers that add up to 34. You can only then click **Check** to see if you are correct.

Pen on

start finish

16	3	2	13
5	10	11	8
9	6	7	12
4	15	14	1

Spin

Check

Show timer

Reset

Level 1

A wheel and a working space are presented on the screen. Clicking the spin button produces a four by four grid containing 16 randomly generated numbers in the working space. You are invited to click and highlight four numbers which sum to 34. A correct solution (which can be verified by clicking 'Check') moves a pointer along a 10-point scale. 10 successive correct solutions produce a 'Congratulations' message. Incorrect solutions are not verified and corrections have to be made before the spin button is activated and a new grid of numbers appears. There are 3 levels differentiated by size of numbers involved. The timer can be used (it runs whether shown or hidden) to show the total time taken to answer all ten questions.

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SPIRE MATHS

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4 by 4 Grids

