Spring

Home

Learning

Pack E

Maths

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Times tables

Activities

Times Tables– Daily Practise 1

Complete the times tables grids.

X	11	8	9	7	4
9					
4					
3					
7					
6					

X	8	4	6	3	7
12					
8					
11					
6					
9					

Timetables– Practise 2

Find factor pairs to complete these calculations:

(a) ☐ x ☐ = 20

(b) ☐ x ☐ = 20

(c) ☐ x ☐ = 36

(d) ☐ x ☐ = 36

(e) ☐ x ☐ = 18

(f) ☐ x ☐ = 18

(g) ☐ x ☐ = 72

(h) ☐ x ☐ = 72

Timetables—Practise 3

Seven times table practise

3 × 7 =	14 ÷ 7 =	42 ÷ 7 =
10 × 7 =	7 × 7 =	63 ÷ 7 =
21 ÷ 7 =	49 ÷ 7 =	1 × 7 =
7 ÷ 7 =	9 × 7 =	84 ÷ 7 =

Timetables– Practise 4

Nine times table practise

Complete the divisions below:

☐ ÷ 9 = 11   ☐ ÷ 9 = 6   ☐ ÷ 11 = 11

☐ ÷ 9 = 7   ☐ ÷ 11 = 12   ☐ ÷ 9 = 9

☐ ÷ 11 = 10   ☐ ÷ 9 = 8   ☐ ÷ 9 = 12

Timetables- Practise 5

Is the number sentence true or false?

2 × 6 = 4 × 3

Is the number sentence true or false?
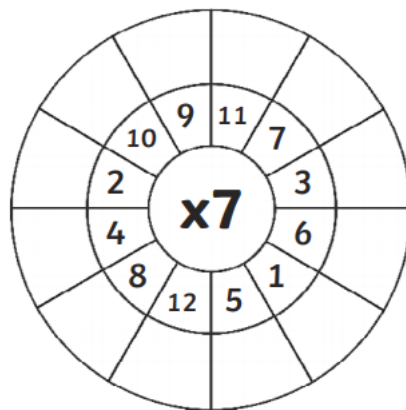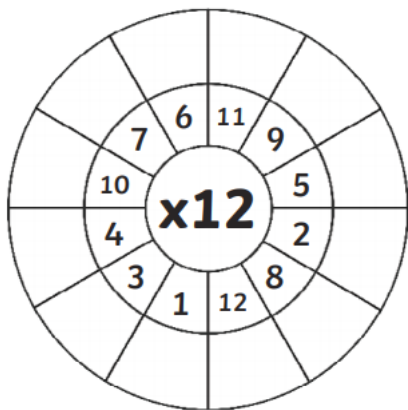
4 × 8 = 5 × 7

Is the number sentence true or false?

3 × 8 = 5 × 6

Is the number sentence true or false?

6 × 6 = 5 × 5

Timetables– Practise 6

Complete the times tables wheel

Timetables– Practise 7

Use your knowledge of times tables to fill in the missing

1. $4 \times \underline{\hspace{1cm}} = 16$

2. $\underline{\hspace{1cm}} \div 6 = 4$

3. $30 \div \underline{\hspace{1cm}} = 5$

4. $7 \times \underline{\hspace{1cm}} = 42$

5. $\underline{\hspace{1cm}} \div 8 = 3$

6. $\underline{\hspace{1cm}} \times 6 = 54$

7. $27 \div \underline{\hspace{1cm}} = 9$

8. $\underline{\hspace{1cm}} \times 6 = 30$

9. $\underline{\hspace{1cm}} \div 7 = 7$

Timetables– Practise 8

Let's Mix up the Times Tables!

A	12
B	8
C	9
D	7
E	12
F	6
G	5
H	12

3 7
9 5
2 1

I	11
J	9
K	5
L	6
M	8
N	7
O	12
P	10

Multiply the two letters. For example, A = 12 and P = 10. This means 12 x 10 = 120

AP	AI	AJ	AK	AL	AM	AN	AO
120							
BP	BI	BJ	BK	BL	BM	BN	BO
CP	CI	CJ	CK	CL	CM	CN	CO

Timetables– Practise 9

Complete the grid below.

X			10	
	49			35
6		36		
				55
4			(40)	

X		8		
	99		45	
		48		42
2				
		24		

Example:

40 ÷ 10 = **4**

Timetables-Practise 10

1. 6 × _____ = 48

2. _____ ÷ 12 = 9

3. _____ × 9 = 63

4. 5 × _____ = 25

5. _____ ÷ 8 = 20

6. 7 × _____ = 35

7. _____ ÷ 12 = 12

8. 99 ÷ _____ = 9

9. _____ × 9 = 36

Maths

Activities

Year 4 written methods

Addition

Year 4 Add numbers with up to 4 digits

Move from expanded addition to the compact column method, **adding units first**, and carrying numbers **underneath** the calculation. Also include money and measures contexts.

e.g. 3517 + 396 = 3913

```
  3 5 1 7
+   3 9 6
  3 9 1 3
    1 1
```

Introduce the **compact column addition** method by asking children to add the two given numbers together using the method that they are familiar with (expanded column addition—see Y3). Teacher models the compact method with carrying, asking children to discuss similarities and differences and establish how it is carried out.

Add **ones** first.

Carry numbers **underneath** the bottom line.

Reinforce correct place value by reminding them the actual value is 5 hundreds add 3 hundreds, **not 5 add 3** etc.

Use and apply this method to money and measurement values.

Representations:
Continue to represent calculations using base 10/dienes and place value counters for those children who need it. See Year 3 representations sheet. Continue to practice exchanging.

Subtraction

Year 4 Subtract with up to 4-digit numbers

Partitioned column subtraction with exchanging (decomposition):

```
  2 7 5 4 - 1 5 6 2 = 1 1 9 2
                 600
  2 0 0 0 +  7 0 0 + 50 + 4
- 1 0 0 0 +  5 0 0 + 60 + 2
  1 0 0 0   1 0 0 + 90 + 2
```

As introduced in Y3, but moving towards more complex numbers and values. Use **place value counters** to reinforce exchanging.

Subtracting money: partition into £1 + 30 + 5 for example.

Compact column subtraction (see video)

```
  2 7 5 4
- 1 5 6 2
  1 1 9 2
```

To introduce the compact method, ask children to perform a subtraction calculation with the familiar partitioned column subtraction then display the compact version for the calculation they have done. Ask pupils to consider how it relates to the method they know, what is similar and what is different, to develop an understanding of it (shown on video).

Give plenty of opportunities to apply this to money and measures.

Always encourage children to consider the best method for the numbers involved—mental, counting on, counting back or written method (see video).

Mental strategies

A variety of mental strategies must be taught and practised, including counting on to find the difference where numbers are closer together, or where it is easier to count on (see video below).

Approximate, Calculate, Check it

Representations:
Continue to represent calculations using base 10/dienes and place value counters for those children who need it. See Year 3 representations sheet. Continue to practice exchanging.

Multiplication

Year 4 Multiply 2 and 3-digits by a single digit, using all multiplication tables up to **12 x 12**

Developing the grid method:

Eg. 136 x 5 = 680

X	100	30	6
5	500	150	30

```
  500
  150
+  30
  680
```

Encourage column addition to add accurately.

Move onto short multiplication (see Y5) if and when children are confident and accurate multiplying 2 and 3-digit numbers by a single digit this way, and are already confident in carrying for written addition.

Children should be able to:

- Approximate before they calculate, and make this a regular part of their calculating, going back to the approximation to check the reasonableness of their answer. e.g:

  346 x 9 is approximately 350 x 10 = 3500

  Record an approximation to check the final answer against.

- Multiply multiples of ten and one hundred by a single-digit, using their multiplication table knowledge.

- Recall all times tables **up to 12 x 12**

Approximate, Calculate, Check it

Division

Year 4 Divide 2-digit numbers by a single digit (where there is no remainder in the final answer)

7 ÷ 2 = 3 R 1

Short division: Limit numbers to **NO** remainders in the answer **OR** carried (each digit must be a multiple of the divisor).

```
    3 2
  3)9 6
```

STEP 1: Once children are secure with division as grouping and demonstrate this using number lines, arrays etc., short division for larger 2-digit numbers should be introduced, initially with carefully selected examples requiring no calculating of remainders at all. Start by introducing the layout of short division by comparing it to an array.

Remind children of correct place value, that 96 is equal to 90 and 6, but in short division, pose:

- How many 3s in 9? = 3, and record it above the **9 tens.**
- How many 3s in 6? = 2, and record it above the **6 units.**

Real life contexts need to be used routinely to help pupils gain a full understanding, and the ability to recognise

Short division: Limit numbers to **NO** remainders in the final answer, but with remainders occurring within the

```
    1 8
  4)7 ³2
```

STEP 2: Once children demonstrate a full understanding of remainders, and also the short division method taught, they can be taught how to use the method when remainders occur within the calculation and be taught to carry the remainder onto the next digit. **If needed, children should use the number line to work out individual division facts that occur which they are not yet able to recall mentally**

Step 3 Only taught when pupils can calculate remainders.

Calculations– Activity 1

Use your Year 4 written method to solve the calculations below. Look at the operation being used and use the written method help sheet.

Addition

65 + 89 =

32 + 78 =

124 + 54 =

318 + 829 =

Multiplication

23 x 6 =

320 x 4 =

489 x 7 =

509 x 8 =

Subtraction

429 - 321 =

892 - 120 =

230 - 27 =

983 - 431 =

Division

192 ÷ 6 =

235 ÷ 5 =

162 ÷ 9 =

184 ÷ 8 =

Calculations– Activity 2

Use your Year 4 written method to solve the below calculations. Look at the operation being used and use the written method help sheet.

Addition

81 + 73 =

92 + 29 =

561 + 463 =

914 + 321 =

Multiplication

32 x 3 =

63 x 2 =

824 x 5 =

790 x 4 =

219 x 6 =

Subtraction

38 - 16 =

239 - 71 =

673 - 124 =

2,294 - 1,062 =

Division

54 ÷ 3 =

248 ÷ 4 =

85 ÷ 5 =

114 ÷ 6 =

Problem Solving– Activity 1

Multiplication & Division

1) The school has a singing group of more than 12 singers but less than 32. They sing together in different ways. Sometimes they sing in pairs and sometimes in groups of 3, 4 or 6. Whatever size groups they are in, no one is left out and everyone is singing. How many singers are there in the school choir?

2) Miss Wood orders some new whiteboard pens for Year 5 and 6. There are 160 children in Year 5 and 6. If she orders 6 boxes of 27 pens, will she have enough? Show your calculation.

Multiplication & Division

1) What could the numbers in the multiplication be?

Every digit is different. ?

?? x 3 = ????

2) In one month, Charlie read 814 pages in his books. His mum read 4 times as much as Charlie which was 184 pages more than Charlie's dad. How many pages did they read altogether? Use a bar model to help.

Reasoning – Activity 1

1) <u>Always, sometimes or never?</u>

An even number that is divisible by 3 is also divisible by 6.

2) Fill in the missing numbers

$25 \times 3 = \square = \square \div \square$

Reasoning– Activity 2

<u>1)</u> Penny says a two digit number multiplied by a one digit number will always give a two digit answer. Is she correct? Justify your answer.

2) Find the mistake that has been made in the calculation below. Explain and correct it.

$$
\begin{array}{r}
47 \\
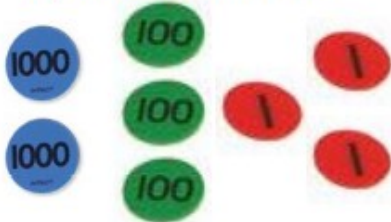\times\ \ 8 \\
\hline
3256
\end{array}
$$

Place Value- Activity 1

1)

	Nearest 10	Nearest 100	Nearest 1000
667			
1274			
2495			

2) What number is represented below?

Use place value counters to represent the following numbers:
1245, 3015, 4702

3) Amelia says 'The number in the place value grid is the largest number you can make with 8 counters.' Do you agree? Prove your answer.

Place Value- Activity 2

1. Caroline thinks that the largest whole number that rounds to 400 is 449. Is she correct? Explain why.

2. Henry says '747 to the nearest 10 is 740.' Do you agree with Henry? Explain why.

3. A number rounded to the nearest 10 is 550. What is the smallest possible number it could be?