



Times Tables Schemes Overview



Times Tables Schemes

Introduction

The Professor Assessor Times Tables Learning Schemes are designed to provide in class resources for the teaching and learning of all the times tables. The schemes are highly flexible allowing teachers to adapt them to their own needs whilst being compatible with the national curriculum and the national Maths Hubs materials. The schemes also complement our online Times Tables Fun and MTC practice and testing solutions.

Booklets

We provide free printable booklets in PDF format for testing individual and combined times tables. The comprehensive booklets are structured to facilitate appropriate access points for all levels of current attainment for each of the times tables. Content is presented in differentiated sections and questions are provided suitable for **beginners**, those **mastering** the tables and for pupils ready for **greater depth** problems.

Booklets are available for individual times tables containing 552 questions and for combined times tables containing 424 questions. These large number of questions facilitate repetitive testing throughout the year to help ensure retention of the multiplication tables facts by the children. The question difficulty graduates throughout each booklet as detailed in tables below but can be summarised as:

- Standard tables questions (graduated – see table below), e.g. 2×4 , 5×4 , 6×4 , 8×4 , 9×4 .
- Associative times tables questions, e.g. 2×4 , 5×4 , 4×6 , 8×4 , 4×9 .
- Associative times tables multiplication and division questions.
- **Multiplication word problems.**
- Multiplication and **division word problems.**
- Beyond the times tables **Associative Law** questions.
- Beyond the times tables **Distributive Law** questions.

Each booklet can be printed as a whole for each pupil or individual pages can be printed with places for pupils to write their name and class on each page.

Pages contain clear areas to enter answers, write total scores for individual and combined sections, and additionally zones to affix reward stickers or print stamps.



Two Flexible Schemes

Two schemes are provided (Scheme A and Scheme B) that can be implemented to suit the preferred learning order of the times tables, i.e. that specified by either the national curriculum, the Maths Hubs, or a bespoke order preferred by the school.

Structure of Schemes A & B

Both schemes share a common structure which facilitates repeated practice. Questions are differentiated into the first half and second half of the times tables, into multiplication and division, and non-associative and associative. Additionally, greater depth questions including word problems and “beyond the times tables” questions are provided in each times table booklet.

The differentiated question structure provides the flexibility for teachers to test partial times tables or full times tables with multiplication and/or division by combining question sections. For example, referring to the table in the following section, to test the first half of a times table using multiplication and division then test using question sections a and c.

Booklets are available for each times table containing 552 questions each and also for combined tables containing 424 questions each. The combined tables booklets are available for the: x2, x5, x10; x3, x4, x8; x6, x7, x9; and either x2 to x9 (Scheme A) or x2 to x12 (Scheme B) tables. A single concise answer booklet is also available for each scheme.



Scheme A - Focus on Column Multiplication.

This scheme targets the tables from 2 to 9. The 10 times table is included for compatibility with the Year 2 National Curriculum but 10s are not used other than in the 10 times table itself. Tables 11 to 12 are an optional addition using the booklets from Scheme B once the tables 2 to 9 have been mastered.

Single Times Tables Booklet Content

Question Section	Question Sub-section	1 st half ¹ x tt		2 nd half ² x tt		1 st half ¹ ÷ tt	2 nd half ² ÷ tt	Greater Depth
		? x tt	tt x ?	? x tt	tt x ?	? ÷ tt	? ÷ tt	
1-4	a	✓						
	b			✓				
	c					✓		
	d						✓	
5-8	a	✓	✓					
	b			✓	✓			
	c					✓		
	d						✓	
9-12		✓	✓	✓	✓	✓	✓	
13								✓ x Word Problems
14								✓ x, ÷ Word Problems
15								✓ Beyond Times Tables Associative Law
16								✓ Beyond Times Tables Distributive Law

1: 1st half of tables: 1 to 5 x times table (tt), e.g. 1x4, 2x4, 3x4, 4x4, 5x4.

2: 2nd half of tables: 6 to 9 x times table (tt), e.g. 6x4, 7x4, 8x4, 9x4.



Question Sections 1 to 4 are split into:

Question sub-section a: Multiplication in order, i.e. numbers x times table (tt).
1st Half of the times tables, i.e. numbers **1 to 5** x times table (tt).
E.g. 1×4 , 2×4 , 3×4 , 4×4 , 5×4 .

Question sub-section b: Multiplication in order, i.e. numbers x times table (tt).
2nd Half of the times table, i.e. numbers **6 to 9** x times table (tt).
E.g. 6×4 , 7×4 , 8×4 , 9×4 .

Question sub-section a: Division, i.e. numbers \div times table (tt).
1st Half of the times tables, i.e. multiples of numbers **1 to 5**.
E.g. $4 \div 4$, $8 \div 4$, $12 \div 4$, $16 \div 4$, $20 \div 4$.

Question sub-section b: Division, i.e. numbers \div times table (tt).
2nd Half of the times tables, i.e. multiples of numbers **6 to 9**.
E.g. $24 \div 4$, $28 \div 4$, $32 \div 4$, $36 \div 4$.

Questions Sections 5 to 8 are split similarly to Question Sections 1 to 4 with the addition that Questions Sections 5 to 8 provide multiplication question in both orders i.e. associative questions, i.e. numbers x times table and times table x numbers.

Questions Sections 9 to 12 provides four sets of 32 questions from numbers **1 to 9** x times table including multiplication and division questions randomly mixed.

Question Section 13 provides 10 multiplication word problems.

Question Section 14 provides 10 multiplication and division word problems.

Question Section 15 provides 10 “Beyond the Times Tables” **Associative Law** problems with multiples of 10 and 100 of the times tables.

Question Section 16 provides 10 “Beyond the Times Tables” **Distributive Law** problems to solve multiplication by numbers up to 24.



Combined Times Tables Booklet Content

The Scheme A combined tables booklets are available for the: x2, x5, x10; x3, x4, x8; x6, x7, x9; and all the x2 to x9 tables. The below table shows the content for the combined x2, x5, x10 booklet.

Question Section	$? \times 2$ $? \times 5$ $? \times 10$	$2 \times ?$ $5 \times ?$ $10 \times ?$	$? \div 2$ $? \div 5$ $? \div 10$	Greater Depth
1, 2, 3, 4	✓			
5, 6, 7, 8	✓	✓		
9, 10, 11, 12	✓	✓	✓	
13				✓ x2 x5 x10 Word Problems
14				✓ x2 x5 x10 ÷2 ÷5 ÷10 Word Problems
15				✓ Beyond the Times Tables Associative Law Tables x10, x100
16				✓ Beyond the Times Tables Distributive Law

Question Sections 1 to 4 each contain 32 non-associative questions for the 2, 5 and 10 times tables, e.g. 1×5 , 7×2 , 3×10 , 8×2 , 9×5 .

Question Sections 5 to 8 each contain 32 associative questions for the 2, 5 and 10 times tables, e.g. 1×5 , 2×7 , 3×10 , 2×8 , 9×5 .

Questions Sections 9 to 12 each contain 32 associative multiplication and division questions for the 2, 5 and 10 times tables.

Question Section 13 provides 10 multiplication word problems.

Question Section 14 provides 10 multiplication and division word problems.



Question Section 15 provides 10 “Beyond the Times Tables” **Associative Law** problems with multiples of 10 and 100 of the times tables.

Question Section 16 provides 10 “Beyond the Times Tables” **Distributive Law** problems to solve multiplication by numbers up to 19.

Scheme A Documents

Answer Booklet

Professor Assessor - Times Tables Scheme A - Answer Booklet.pdf

Single Times Tables

Professor Assessor - Times Tables Scheme A - Booklet x2.pdf
Professor Assessor - Times Tables Scheme A - Booklet x3.pdf
Professor Assessor - Times Tables Scheme A - Booklet x4.pdf
Professor Assessor - Times Tables Scheme A - Booklet x5.pdf
Professor Assessor - Times Tables Scheme A - Booklet x6.pdf
Professor Assessor - Times Tables Scheme A - Booklet x7.pdf
Professor Assessor - Times Tables Scheme A - Booklet x8.pdf
Professor Assessor - Times Tables Scheme A - Booklet x9.pdf
Professor Assessor - Times Tables Scheme A - Booklet x10.pdf

Combined Times Tables

Professor Assessor - Times Tables Scheme A - Booklet x2 x5 x10.pdf
Professor Assessor - Times Tables Scheme A - Booklet x3 x4 x8.pdf
Professor Assessor - Times Tables Scheme A - Booklet x6 x7 x9.pdf
Professor Assessor - Times Tables Scheme A - Booklet x2 to x9.pdf

Optional:

Professor Assessor - Times Tables Scheme B - Booklet x11.pdf
Professor Assessor - Times Tables Scheme B - Booklet x12.pdf
Professor Assessor - Times Tables Scheme B - Booklet x2 to x12.pdf



Scheme B - Traditional Times Tables 2 to 12

This scheme targets the traditional full set of times tables from 2 to 12.

Single Times Tables Booklet Content

Question No.	Question Sub-section	1 st half ¹ x tt		2 nd half ² x tt		1 st half ¹ ÷ tt	2 nd half ² ÷ tt	Greater Depth
		? x tt	tt x ?	? x tt	tt x ?	? ÷ tt	? ÷ tt	
1-4	a	✓						
	b			✓				
	c					✓		
	d						✓	
5-8	a	✓	✓					
	b			✓	✓			
	c					✓		
	d						✓	
9-12		✓	✓	✓	✓	✓	✓	
13								✓ x Word Problems
14								✓ x, ÷ Word Problems
15								✓ Beyond Times Tables Associative Law
16								✓ Beyond Times Tables Distributive Law

1: 1st half of tables: 1 to 6 x times table (tt), e.g. 1x4, 2x4, 3x4, 4x4, 5x4, 6x4.

2: 2nd half of tables: 7 to 12 x times table (tt), e.g. 7x4, 8x4, 9x4, 10x4, 11x4, 12x4.



Question Sections 1 to 4 are split into:

Question sub-section a: Multiplication in order, i.e. numbers x times table (tt).
1st Half of the times tables, i.e. numbers **1 to 6** x times table (tt).
E.g. 1×4 , 2×4 , 3×4 , 4×4 , 5×4 , 6×4 .

Question sub-section b: Multiplication in order, i.e. numbers x times table (tt)
2nd Half of the times table, i.e. numbers **7 to 12** x times table (tt).
E.g. 7×4 , 8×4 , 9×4 , 10×4 , 11×4 , 12×4 .

Question sub-section a: Division, i.e. numbers \div times table (tt).
1st Half of the times tables, i.e. multiples of numbers **1 to 6**.
E.g. $4 \div 4$, $8 \div 4$, $12 \div 4$, $16 \div 4$, $20 \div 4$, $24 \div 4$.

Question sub-section b: Division, i.e. numbers \div times table (tt).
2nd Half of the times tables, i.e. multiples of numbers **7 to 12**.
E.g. $28 \div 4$, $32 \div 4$, $36 \div 4$, $40 \div 4$, $44 \div 4$, $48 \div 4$.

Questions Sections 5 to 8 are split similarly to Question 1 to 4 with the addition that Questions 5 to 8 provide multiplication question in both orders i.e. associative questions, i.e. numbers x times table and times table x numbers.

Questions Sections 9 to 12 provides four sets of 32 questions from numbers **1 to 12** x times table including multiplication and division questions randomly mixed.

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1, 2, 3, 4	✓			
5, 6, 7, 8	✓	✓		
9, 10, 11, 12	✓	✓	✓	
13				✓ x2 x5 x10 Word Problems
14				✓ x2 x5 x10 ÷2 ÷5 ÷10 Word Problems
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Question Sections 1 to 4 each contain 32 non-associative questions for the 2, 5 and 10 times tables, e.g. 1×5 , 7×2 , 3×10 , 11×2 , 12×5 .

Question Sections 5 to 8 each contain 32 associative questions for the 2, 5 and 10 times tables, e.g. 1×5 , 2×7 , 3×10 , 2×11 , 12×5 .

Questions Sections 9 to 12 each contain 32 associative multiplication and division questions for the 2, 5 and 10 times tables.

Question Section 13 provides 10 multiplication word problems.

Question Section 14 provides 10 multiplication and division word problems.



Question Section 15 provides 10 “Beyond the Times Tables” **Associative Law** problems with multiples of 10 and 100 of the times tables.

Question Section 16 provides 10 “Beyond the Times Tables” **Distributive Law** problems to solve multiplication by numbers up to 19.

Scheme B Documents

Answer Booklet

Professor Assessor - Times Tables Scheme B - Answer Booklet.pdf

Single Times Tables

Professor Assessor - Times Tables Scheme B - Booklet x2.pdf
Professor Assessor - Times Tables Scheme B - Booklet x3.pdf
Professor Assessor - Times Tables Scheme B - Booklet x4.pdf
Professor Assessor - Times Tables Scheme B - Booklet x5.pdf
Professor Assessor - Times Tables Scheme B - Booklet x6.pdf
Professor Assessor - Times Tables Scheme B - Booklet x7.pdf
Professor Assessor - Times Tables Scheme B - Booklet x8.pdf
Professor Assessor - Times Tables Scheme B - Booklet x9.pdf
Professor Assessor - Times Tables Scheme B - Booklet x10.pdf
Professor Assessor - Times Tables Scheme B - Booklet x11.pdf
Professor Assessor - Times Tables Scheme B - Booklet x12.pdf

Combined Times Tables

Professor Assessor - Times Tables Scheme B - Booklet x2 x5 x10.pdf
Professor Assessor - Times Tables Scheme B - Booklet x3 x4 x8.pdf
Professor Assessor - Times Tables Scheme B - Booklet x6 x7 x9.pdf
Professor Assessor - Times Tables Scheme B - Booklet x2 to x12.pdf