

## First Level - Exploring Number Multiplication and Division Homework Cards



**MD1.1 I can make equal groups and can combine them to make a larger number**

**Three bears** *outline drawings of three bears (optional)*. Ask children to draw a picture of three bears (or give them pre-drawn outlines). They draw five different types of objects on all the bears and then record or write the multiplication sentences as appropriate. For example, 'Each bear has two gloves. Three groups of two makes six.'

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**MD1.1 I can make equal groups and can combine them to make a larger number**

**Sports day** Ask children to find as many different solutions as they can to this sports day problem:

There are \_\_\_\_ teams. Each team has \_\_\_\_ children.  
This makes \_\_\_\_ children altogether.

Ask children in pairs to fill in the blanks with numbers to make the statement true for as many different sports as they can. They could draw to assist their working.

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**MD1.2 I can take a large number and share it into equal groups**

**12 peas** Ask children to draw 4 large circles in their learning logs to represent 4 plates. On each plate they should draw 12 peas, grouped into equal groups, making each plate different. Children could be encouraged to work practically, using any items they have at home, e.g. coins, sweets, grapes, to represent the peas.

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**MD1.2 I can take a large number and share it into equal groups**

**Sort it** Assist children in folding a sheet of paper into 4 (or 8) sections. Ask them to collect 20 small items, such as coins, sweets, grapes and share them equally onto the folded paper. They record this pictorially in their learning logs. Children can repeat this several times for other numbers, e.g. 16 and 24. Ask them to record anything they have noticed.

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### MD1.3 I can split a group of items into smaller equal groups

**12 peas** Ask children to draw 4 large circles in their learning logs to represent 4 plates. On each plate they should draw 12 peas, grouped into equal groups, making each plate different. Children could be encouraged to work practically, using any items they have at home, e.g. coins, sweets, grapes, to represent the peas.

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### MD1.3 I can split a group of items into smaller equal groups

**How many?** Ask children to collect between 10 and 30 small items at home to sort into equal groups. For each size of group, children note the total number of items (e.g. 22), the group size (e.g. 3, 4, 5 or 6), the number of groups that can be made and the number left over, e.g. '22 is 7 groups of 3 with 1 left over'.

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### MD1.4 I can display equal groups in different ways and can write number sentences about them

**Add and multiply** Ask children to find packets in cupboards at home that contain more than one of the same item, e.g. 8 cheese triangles, 4 tins of beans, 8 bars. In their learning logs they write how many of each would be in several of these packets, showing this as an addition and as a multiplication, e.g. *4 packets of 8 chocolate bars =  $8 + 8 + 8 + 8 = 4 \times 8 = 32$* .

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### MD1.4 I can display equal groups in different ways and can write number sentences about them

**Legs!** Ask children to count the number of legs of each of the things below in their home and record each as a number sentence:

- legs of tables in my home, e.g.  $3 \times 4 = 12$   
(3 tables with 4 legs = 12 legs)
  - legs of people in my home
  - legs of cats, dogs or other 4-legged animals, in my home.
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**MD1.5a I have explored how times-tables are built up and can discuss the patterns within and between them - 2, 4 and 8**

**Number stories** Ask children to make up stories for facts from given times-tables, e.g. *8 friends each had 4 sweets, making 32 altogether* for the fact  $8 \times 4 = 32$ . They record the stories and the number facts in their learning logs, including a picture if they wish.

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**MD1.5a I have explored how times-tables are built up and can discuss the patterns within and between them - 2, 4 and 8**

**Double, double, double** Ask children to write a fact from the 2 times-table, e.g.  $5 \times 2 = 10$ , in their learning logs. Beneath they write the related fact from the 4 times-table, i.e.  $5 \times 4 = 20$ , and then the related fact from the 8 times-table, i.e.  $5 \times 8 = 40$  to form a set of three facts. Children write two more sets of three facts using a different starting fact each time.

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**MD1.5b I have explored how times-tables are built up and can discuss the patterns within and between them - 10 and 5**

**Teach them how** Ask children to write two short explanations in their learning logs for children of a younger age. These should explain how the 5 and 10 times-tables are related. Encourage children to use diagrams and pictures to support their explanations.

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**MD1.5b I have explored how times-tables are built up and can discuss the patterns within and between them - 10 and 5**

**Coin counting** Ask children to copy and continue the following patterns in two columns. Ask them to note any patterns they see between the numbers in the two columns.

One 5p coin = 5p      One 10p coin = 10p  
Two 5p coins = 10p      Two 10p coins = 20p  
Three 5p coins = ...

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**MD1.5c I have explored how times-tables are built up and can discuss the patterns within and between them - 3, 6 and 9**

**Add the digits** Ask children to investigate adding the digits of the answers to the 9 times-table and to record their findings, e.g.

$$1 \times 9 = 9 \rightarrow 9$$
$$2 \times 9 = 18 \rightarrow 1 + 8 = 9$$
$$3 \times 9 = 27 \rightarrow 2 + 7 = 9$$

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**MD1.5c I have explored how times-tables are built up and can discuss the patterns within and between them - 3, 6 and 9**

**Phoney phone** Ask children to look at the arrangement of numbers on a phone (or a remote control). Ask them to copy the arrangement of the display, but instead of writing the digits 0 to 9, they multiply each digit by 3, e.g. the display would show 3, 6, 9, 12, etc. Ask the children to write notes about any patterns they see, e.g. that multiples of 9 form a line on the display.

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**MD1.6 I can use my knowledge of how a times-table is built up to solve division problems**

**Teach them how** Ask children to write two short explanations in their learning logs for children of a younger age. These should explain how times-tables are related to division facts. Encourage children to use diagrams and pictures to support their explanations.

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**MD1.6 I can use my knowledge of how a times-table is built up to solve division problems**

**Monkey puzzles** Ask children to create their own monkey puzzles similar to the following:

*3 monkeys have 18 bananas. They share them equally. How many do they each get?*

Children write at least four of these questions and keep a separate record of the answers. The questions can form a class quiz at school.

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### MD1.7a I can recall my table facts quickly and accurately - 2, 4 and 8

**Tables puzzle** Ask children to write out one of the times-tables in order, without the answers, and then cut out each question to create a puzzle. On the back of each question, e.g.  $4 \times 8$ , they write the answer, e.g. 32. Children can use the puzzle cards to test their knowledge of the answers to table facts or of the question that produces a particular answer.

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### MD1.7a I can recall my table facts quickly and accurately - 2, 4 and 8

**Join the dots** Children make a simple join-the-dots puzzle using answers to a chosen times-table in order. They draw a simple outline of a shape or picture in pencil without taking the pencil off the paper. Then, using pen, they write numbers in order. Finally, the shape is rubbed out to leave a puzzle for a friend.

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### MD1.7b I can recall my table facts quickly and accurately - 10 and 5

**Snake drawing** Ask children to draw a snake with 10 sections in their learning logs. In each section they write the multiples of 5 (or 10) in order. They read the multiples aloud in order. To help them memorise the table, they could cover one number and say all the multiples again. They repeat, each time covering an extra number, until all are covered and the child is able to recite the multiples in order without looking at them.

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### MD1.7b I can recall my table facts quickly and accurately - 10 and 5

**Tables puzzle** Ask children to write out one of the 5 or 10 times-tables in order, without the answers, and then cut out each question to create a puzzle. On the back of each question, e.g.  $3 \times 5$ , they write the answer, e.g. 15. Children can use the puzzle cards to test their knowledge of the answers to table facts or of the question that produces a particular answer.

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### MD1.7c I can recall my table facts quickly and accurately - 3, 6 and 9

**Who wants to be a millionaire?** Each child makes up several 'Who wants to be a millionaire?' questions using the facts from the 3, 6 and 9 times-tables. They make up four answers for each question, A, B, C and D, only one of which is correct. The questions can be used as a quiz back at school.

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### MD1.7c I can recall my table facts quickly and accurately - 3, 6 and 9

**Hand game (for 2 players)** Ask children to choose a table to practise, e.g. 3, 6 or 9. On the count of 3, both players hold out a hand with between 1 and 5 fingers out (so there will be 2-10 fingers in total). They multiply this by the chosen table number. The first to call out the correct answer scores a point. The winner is the first to 10 points.

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### MD1.8 I can multiply and divide by 10 and 100

**Newspaper search** Ask children to cut out multiples of 10 or 100 from newspapers or magazines and stick them into their learning logs. For each number they write a multiplication or division involving that number, e.g. for 400,  $4 \times 100 = 400$  or  $400 \div 10 = 40$ , etc.

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### MD1.8 I can multiply and divide by 10 and 100

**Shape trail** Provide children with the following code:

♥ =  $\times 10$ , ♦ =  $\times 100$ ,  
♣ =  $\div 10$ , ♠ =  $\div 100$ .

Ask children to write several trails of numbers with these codes from any starting number.

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**MD1.9a I can use my table facts and a variety of mental methods to work out multiplication calculations - Pairs and multiples of 10 and 100**

**Multiples puzzle** Ask children to write questions related to times tables that involve multiples of 10 or 100 on to paper without the answers, e.g.  $40 \times 50$ ,  $3 \times 20$ ,  $5 \times 600$ ,  $400 \times 600$ , etc. They cut out each question to create a puzzle. On the back of each question they write the answer. Children use the puzzle cards to test how fast they can derive answers using their knowledge of table facts.

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**MD1.9a I can use my table facts and a variety of mental methods to work out multiplication calculations - Pairs and multiples of 10 and 100**

**Teach them how** Ask children to write two short explanations in their learning logs for children of a younger age. These should explain how times tables facts are related to multiplying multiples of 10 or 100 such as  $40 \times 50$ ,  $3 \times 20$ ,  $5 \times 600$ ,  $400 \times 600$ , etc. and how tables can be used to help answer such questions.

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**MD1.9b I can use my table facts and a variety of mental methods to work out multiplication calculations - 2-digit numbers multiplied by 1-digit numbers**

**Tables puzzle** Explain that children should use the digits 3, 4, 5 to make and answer as many  $TU \times U$  questions as they can, e.g.  $34 \times 5$ ,  $43 \times 5$ ,  $53 \times 4$ ,  $54 \times 3$ . Then they write notes to say what they discovered about the answers and say which arrangement gave the largest and smallest solutions.

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**MD1.9b I can use my table facts and a variety of mental methods to work out multiplication calculations - 2-digit numbers multiplied by 1-digit numbers**

**Vet problems** Ask children to write prescriptions for pet pills and say how many pills are needed, e.g. A dog needs 5 pills for 21 days - this is 105 pills or A rabbit needs 4 pills for 32 days - this is 128 pills. Encourage them to show or explain their working.

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**MD1.10 I can use my table facts and a variety of mental methods to work out division calculations - 2-digit numbers divided by 1-digit numbers**

**A, B or C** Ask children to write five 2-digit by 1-digit division questions and, for each, to provide three possible answers, A, B and C, one of which must be correct. Questions can be used for a quiz at school.

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**MD1.10 I can use my table facts and a variety of mental methods to work out division calculations - 2-digit numbers divided by 1-digit numbers**

**Division problems** Ask children to use the digits 4, 8 and 2 to make as many different division problems as they can, e.g.  $24 \div 8$ ,  $48 \div 2$ , etc. They solve each question, using an appropriate mental method and write an explanation of how they solved each one.

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**MD1.11 I can select and use the most appropriate strategy for solving multiplication and division problems**

**Calculation choices** Ask children to write a multiplication and division question and explain to someone at home how they did it.

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**MD1.11 I can select and use the most appropriate strategy for solving multiplication and division problems**

**Three digits** Explain that children should write using the digits 2, 4, and 5 to make and answer as many  $TU \times U$  and  $TU \div U$  questions as they can, e.g.  $24 \times 5$  and  $52 \div 4$ , etc. For each calculation, they write notes to explain their methods.

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