

Multiplication Prior Assessment Questions 6,7 and 8

Objective: I can use the long multiplication method to multiply a number by a 2digit number.

NC NASMD1: Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.

Teacher Input Ideas:

Place a 4digit amount onto the board and ask the children to multiply this by any one digit number of their choice. Encourage children to share how they worked it out using the short multiplication method. Some children could be challenged by guessing their partner's 1 digit number, using the amount and the answer to help them to work it out.

Once the children are secure with the short method and can use this to multiply a one digit number by a 3 or 4digit amount, place 26×39 onto the board.

Allow the children a few moments to try to work out the answer. Use this time to also help you to assess and group the children for the lesson. Look around to see if any children are already using the long method.

Model to the children how to use the long method ensuring that the correct vocabulary is being used to help the children understand place value. For example:

$$\begin{array}{r} \text{th h t o} \\ 26 \\ \hline 234 \\ \text{2 5} \\ 6180 \\ \hline \text{1} \\ 6414 \end{array}$$

Model that we are first multiplying 9×6 and as with the short method we carry this over. You may want the children to write this in a different colour, size or position so that they understand which numbers are the answer and which are being carried over.

Then model 9×20 and again the carrying over and adding the 5 tens that had been made in 6×9 . You then may want the children to put a line through what they have carried as they have finished with that information now.

Model working out the next part underneath. Ensure the children understand that the next calculation is 30×6 and that is why a zero has been created. Always ensure that the children have a good understanding of the value of the number. Labelling the columns can help too.

Children will often make errors here so really emphasise the amount. Some children could perform their working out on place value chart templates to help them to understand the value they are multiplying.

Practice Activities

Purple Practice: Most suited for children that made errors in question 6 and 7 and would benefit from securing the long multiplication method for 2 digit by 2 and 3 digit amounts.

The children can pick 5 blocks to answer from the sheet for 2 digit \times 2 digit. When secure and demonstrate good understanding with place value, the children can then pick amounts from the 3 \times 2 digit blocks. If children are having difficulty they can perform their working out on place value chart templates to help them to understand the value of the digit they are multiplying.

Green Practice: Most suited for children that made errors in question 7 and 8 and would benefit from securing the long multiplication method for 2 digit by 3 and 4 digit amounts.

The children can pick 5 blocks to answer from the sheet for 3 digit \times 2 digit. When secure and demonstrate understanding with place value, the children can then pick amounts from the 4 \times 2 digit blocks. If children are having difficulty they could perform their working out on place value chart templates to help them to understand the value of the digit they are multiplying.

Yellow Practice: Most suited for children who are ready to pick out key information needed to perform written multiplication calculations. The activity provides opportunity for the children to apply the long multiplication method for amounts including 2,3 and 4 digit amounts.

This activity has key information presented on the page. The children must pick out which parts are needed to answer each question. Encourage the children to apply suitable multiplication methods after reading the question carefully. Some require multistep calculations.

Mastery: This activity provides opportunity to perform multiplication written methods and a fluency opportunity to apply knowledge of time.

The children should identify that there are 365 days in a year. They should know to \times 365 by how old they are. Children could be pushed further to work out how many leap years they have been alive for and add the extra days. Some children may also work out how many days have passed since their last birthday so that they can have an accurate answer. Some children may benefit from having a calendar to help. For the second part of the task, the children should know that they need to multiply the answer to the first question by 24, as there have been 24 hours in each day they have lived so far.

Answers:

Purple

$12 \times 17 = 204$

$12 \times 123 = 1476$

$18 \times 19 = 342$

$762 \times 15 = 11430$

$28 \times 12 = 336$

$231 \times 11 = 2541$

$65 \times 19 = 1235$

$872 \times 19 = 16568$

$56 \times 23 = 1288$

$22 \times 160 = 3520$

$89 \times 25 = 2225$

$709 \times 25 = 17725$

$78 \times 21 = 1638$

$310 \times 21 = 6510$

$95 \times 47 = 4465$

$993 \times 39 = 38727$

$43 \times 80 = 3440$

$571 \times 50 = 28550$

$95 \times 32 = 3040$

$782 \times 48 = 37536$

Green: Answers for the 1st block as above for 3 digit by 2-digit multiplication

2 digit x 4 digit:

$12 \times 1928 = 23136$

$14 \times 9009 = 126126$

$16 \times 8890 = 142240$

$25 \times 5268 = 131700$

$23 \times 4213 = 96899$

$30 \times 2675 = 80250$

$45 \times 4032 = 181440$

$47 \times 9201 = 432447$

$69 \times 3938 = 271722$

$98 \times 7259 = 711382$

Yellow:

1) $28 \times 190 = 5320$

2) $38 \times 31 = 1178$

3) $59 \times 114 = 6726$

4) $30 \times 12 \times 190 = 68400$

5) $6 \times 1330 = 7980$

6) $1.04 \times 190 = 197.6$

7) $28 \times 1330 = 37240$

Purple Practice

Lo: I can multiply 3 and 2 digit numbers by a 2 digit number

2 digit x 2 digit

12×17

$=$

$=$

18×19

$=$

$=$

28×12

$=$

$=$

65×19

$=$

$=$

56×23

$=$

$=$

89×25

$=$

$=$

78×21

$=$

$=$

95×47

$=$

$=$

43×80

$=$

$=$

95×32

$=$

$=$

2 digit x 3 digit

12×123

$=$

$=$

762×15

$=$

$=$

231×11

$=$

$=$

872×19

$=$

$=$

22×160

$=$

$=$

709×25

$=$

$=$

310×21

$=$

$=$

993×39

$=$

$=$

571×50

$=$

$=$

782×48

$=$

$=$

Pick 5 blocks from each tower and work out the answers.

2 digit x 3 digit

12×123

=

762×15

=

231×11

=

872×19

=

22×160

=

709×25

=

310×21

=

993×39

=

571×50

=

782×48

=

Pick 5 blocks from each tower and work out the answers.

2 digit x 4 digit

12×1928

=

14×9009

=

16×8890

=

25×5268

=

23×4213

=

30×2675

=

45×4032

=

47×9201

=

69×3938

=

98×7259

=

Yellow Practice

LO: I can select relevant information and decide the method I need to use for the calculation.

Here is some information about Pear Tree Primary School. Use the information below to solve the problems.

There are 190 school days in a year.

There are 38 Wednesdays in a school year.

There are 114 Wednesdays, Thursdays and Fridays in one school year.

There are 1330 school days from Foundation Stage to Year 6.

Mr Jones has 31 children in his class.

Mrs Moore has 28 children in her class.

There are 12 classes in the school.

As an average, there is 30 children in each class.

- 1) Each child has an apple each day. How many apples does Mrs Moore need to order for her class for one year?
- 2) Mr Jones gives each of his children a sticker for good reading on Wednesday every week. How many stickers has he used after a year?
- 3) Mr Jones's and Mrs Moore's classes have milk every Wednesday, Thursday and Friday. How many milks does the school need to order for a year?
- 4) Every child at the school is given a new cup each day to use at the water fountain. How many cups does the school use a year?
- 5) Mrs Langton is a lunch time supervisor at the school. She makes 6 journeys a day to and from the school to go to work and collect her daughter. Her daughter is in foundation stage. How many journeys will she have made by the time her daughter has left school?
- 6) Krystal lives 0.52 km from the school. She walks to and from the school every day. How many kilometres will she walk in a year?
- 7) Every day, each child gets a sticker to inform the lunch staff if they are school dinners or packed lunch. How many stickers will Mrs Moore's class use in their whole time at Pear Tree Primary School?

Use your knowledge of time to help you answer these problems. You may need a calendar to help you.

1. How many days have you lived so far?

?

?

?

?

?

?

?

?

2. How many hours have you lived so far?

?

?

?

?

?

?

?

?

Hint : Think about how many days are in a year. Can you work out how many days have passed since your last birthday?

How many hours are in a day?