Multiplication Prior Assessment Question 1 (b)

Objective: I can use x table facts and place value understanding to multiply mentally.

NC NASMD4: I can perform mental calculations.

Teacher Input Ideas:

Review Question 1b of the prior assessment. There is only one question in this section to assess the children's understanding of using multiplication knowledge so you may want to ask a few questions in the starter to review this with the children. For example: 8 x 7, 9 x 6, 90 x 5, 6 x 80, 70 x 20, 600 x 300.

Recap x table facts. If children are finding particular ones tricky, such as 7 x 8, look at ways the children can try to remember this or find quicker ways to find the answer without having to count in 7's from zero. For example: "I know 5 x 8 is 40, so 2 more lots to make 7 x 8 is 16. So, the answer must be 56." Alternatively, children may count on in eights from 40. Provide partner talk time so that children can share their different strategies.

Model using x table facts for multiplying multiples of ten. For example, 5 x 60, 40 x 50, 600 x 50. Model that we could use 5 x 6 first to make 30, however we then need to make our number 100 x bigger so that we have worked out 600 x 5, move the numbers two places for x by 100 and then 10 x bigger so that we have x by 50. This could be modelled with a place value chart to help show this. DO NOT SAY PUT THE ZEROES BACK ON as children will have misconceptions when multiplying decimals.

Practice Activities

Purple Practice: Most suited for children who made errors in **Question 1 due to lack of knowing x table facts.** They need to practise and secure these to enable them to do any mental and written calculation.

This activity asks simple times table facts that are commonly answered incorrectly by primary aged children. The activity encourages the children to work out the answer and to think of shortcuts and ways to find the answer quickly/ retain.

You may want to start with testing the x table facts to identify which ones the children have difficulty with. Sticky labels could be stuck over the suggested ones on the purple sheet so that children could write own based on gaps.

Green Practice: Most suited for children who made errors in **Question 1 as they have little understanding of using place value knowledge.**

This activity requires the children to create own multiplication sums by selecting amounts from the 10 provided. If the children need to secure certain x table facts, you could select the most relevant for the children. If the children need to secure place value understanding when a zero is created in the multiplication they are doing, guide the children in multiplying different amounts by 50. For example, 60 x 50 =3000

The challenge requires the children to understand the <> signs and to write the amounts in words (applying place value). Additionally, the children may need a little guidance in spotting multiples of 6. (Fluency)

Yellow Practice: **Most suited for children who demonstrated good understanding of using mental methods in Q1** of the prior assessment and would benefit applying mental methods to multiply decimals by whole amounts.

The activity requires the children to work out whole amounts x by a decimal. Children may need place value charts to help them to understand place value when multiplying decimals. Questions 13,14 and 15 may need some guidance especially when understanding why 0.3 x 0.4 has a lower answer than the amounts multiplied. Additionally, children are required to apply their knowledge of equivalent fractions.

Mastery : Encourage the children to work their way along the track, working out the answers as quickly and efficiently as possible. The children will need to use a variety of mental methods (from this lesson and the prior lesson) to enable them to answer the questions in the time challenged. Encourage the children to share the methods they used so they can begin to identify which methods were more efficient for different types of questions.

Answers:

Purple:

1) a) 48 b) 56 c) 96 d) 63
e) 132 f) 42

2) 8 x **6** **8** x 6 **4** x 12 2 x **24**

Green: Open ended answers dependent on what the children have multiplied by each other.

Challnege: suggested examples

	< 100,000	>100,000
Multiple of 6	Thirty thousand (50 x 600)	One million and eight hundred thousand (200 x 9000)
Not a multiple of 6	Fourteen thousand (200x 70)	Four hundred and fifty thousand (50 x 9000)

Yellow:

1) 3.2	2) 2.4	3) 15	4) 1600
5) 2.5	6)300	7)0.8	8) 1.8
9) 48	10) 12	11)0.32	12) 0.18
13) 0.12	14) 8	15) 3.5	

Mastery

BRICKWORK
Mathematics

Purple Practice

Lo: I can explore ways to help me to remember tricky x table facts

1. Look at each multiplication sum. Work out the answer. In the clouds write how you can remember this or the shortcut you can use to get to the answer quickly.

For example: I know that 5 x 8 = 40, so for 6x 8, I need to add one more group of 8. 40 + 8 = 48

6 x 8 =

7x 8 =

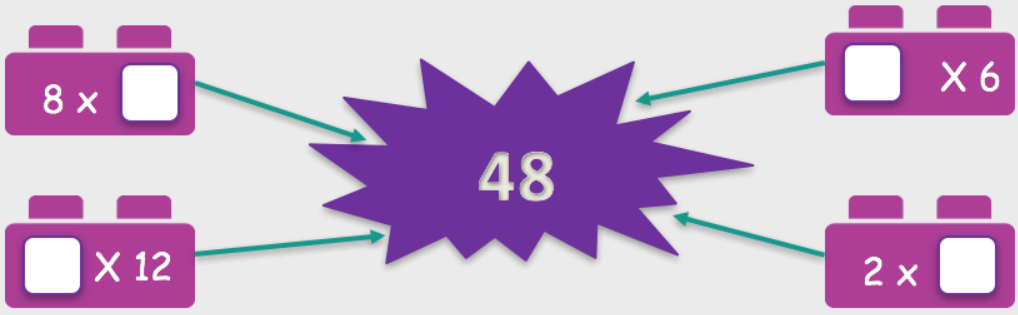
8 x 12 =

9 x 7=

11x12 =

6 x 7 =

2. Use your x table facts to work out the missing amounts.

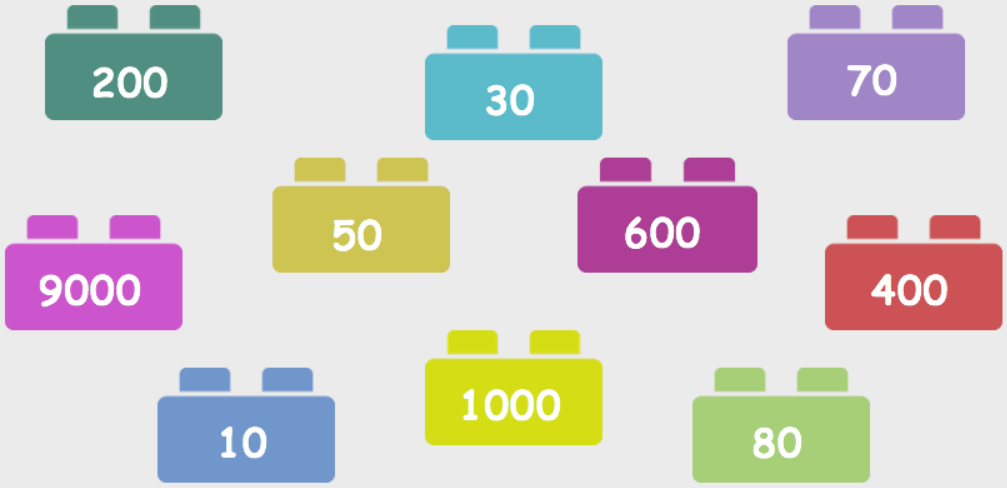


BRICKWORK Mathematics

Green Practice

Lo: I can use x table facts and place value understanding to multiply mentally.

Pick 2 blocks at a time and multiply them.



Challenge: In words, write the answers from your sums and place them in the Carroll diagram.

	<100,000	>100,000
Multiple of 6		
Not a multiple of 6		

BRICKWORK Mathematics

Yellow Practice

LO: I can use x table facts and place value understanding to multiply mentally.

Look at each sum and work out the answer using your knowledge of x table facts and place value.

1) 2×1.6

2) 3×0.8

3) 30×0.5

4) 80×20

5) 5×0.5

6) 500×0.6

7) 8×0.1

8) 9×0.2

9) 60×0.8

10) 60×0.02

11) 8×0.04

12) 2×0.09

13) 0.3×0.4

14) $\frac{1}{5} \times 40$

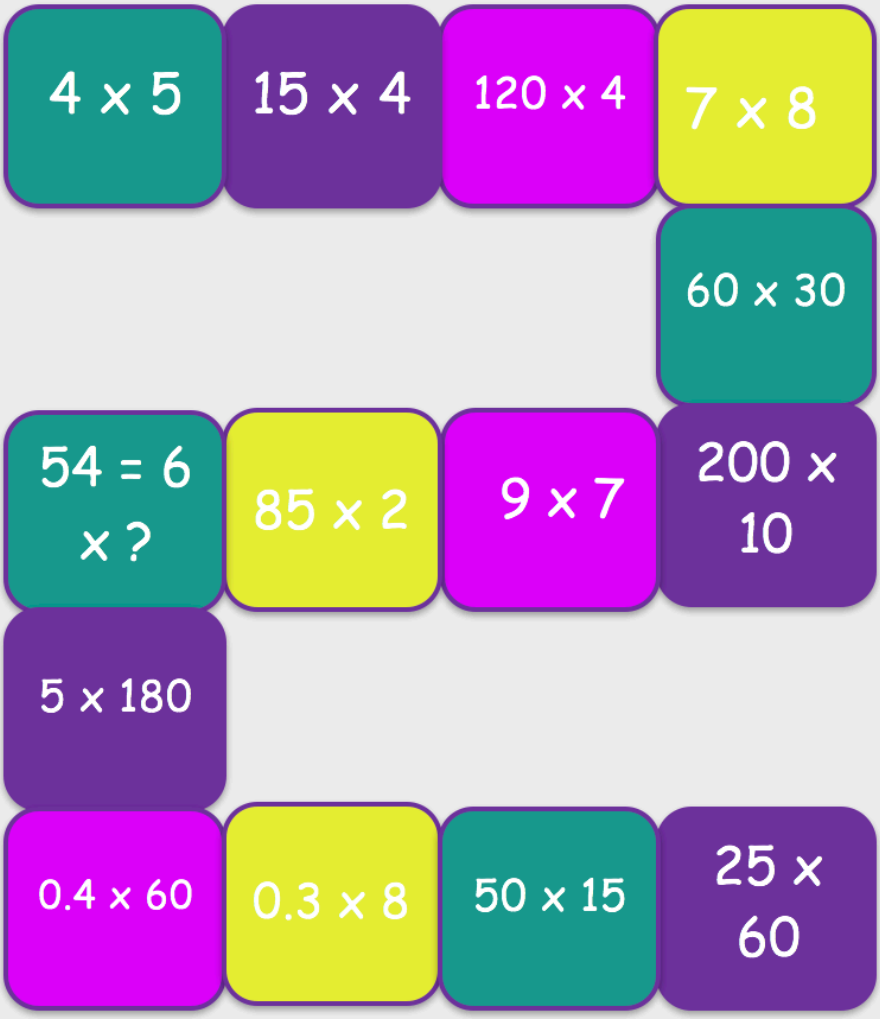
15) $\frac{1}{2} \times 7$

BRICKWORK Mathematics

Mastery

Fluency

Work your way along the track finding the answers mentally. You may want to challenge yourself by timing how long it takes. Can you complete the whole track in under 2 minutes? Can you complete the track in 90 seconds?



Finished?

Discuss with a friend how you worked out some of the sums.

- Did you use the same methods as each other?
- Did you use a variety of methods along your journey?
- Can you find a more efficient method for one of the sums?