

1) Answer these multiplication sums

a)  $16 \times 4 = 64$

b)  $4 \times 60 = 240$

c)  $15 \times 8 = 120$

d)  $40 \times 50 = 2000$

e)  $6 \times 80 = 480$

You may want to provide time to discuss with individual children the strategies they used to see if they are using efficient strategies. Children should show that they have used strategies such as partitioning or doubling to find 2,4 and 8 lots and using timetable facts and place value knowledge to mentally multiply efficiently.

2) Mrs Woodford buys 6 large packets of seeds. Each packet weighs 149 grams. What is the total weight of the 6 packets?

Children may have used mental method such as rounding:

$$150 \times 6 = 900$$

$$900 - 6 = 894$$

Some children may show understanding of a more formal written method for multiplication (see below). For year 5, the children should be encouraged to suggest when a mental method is most appropriate and when a more formal short or written method can be used.

**894 grams**

3)  $67 \times 8 =$

h	t	o		h	t	o			
	6	7			6	7			
x		8		x		8			
<hr style="border: 1px solid blue;"/>				<hr style="border: 1px solid blue;"/>					
	5	6		5	3	6			
4	8	0		5	5				
<hr style="border: 1px solid blue;"/>				<hr style="border: 1px solid blue;"/>					
5	3	6							
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Children may have partitioned here. If children have selected a written method, in year 5 the children should be using a formal written method of either the expanded or short multiplication

536

4)  $213 \times 6 =$

	2	1	3			2	1	3	
x			6		x			6	
<hr style="border: 1px solid blue;"/>				<hr style="border: 1px solid blue;"/>					
		1	8		1	2	7	8	
		6	0		1		1		
1	2	0	0						
<hr style="border: 1px solid blue;"/>				<hr style="border: 1px solid blue;"/>					
1	2	7	8						
<hr style="border: 1px solid blue;"/>				<hr style="border: 1px solid blue;"/>					

1278

5)  $1029 \times 4 =$

	1	0	2	9			1	0	2	9	
x				4		x				4	
<hr style="border: 1px solid blue;"/>					<hr style="border: 1px solid blue;"/>						
			3	6		4	1	1	6		
			8	0			1	3			
				0							
	4	0	0	0							
<hr style="border: 1px solid blue;"/>					<hr style="border: 1px solid blue;"/>						
	4	1	1	6							
<hr style="border: 1px solid blue;"/>					<hr style="border: 1px solid blue;"/>						

4116

6)  $25 \times 31 =$

	2	5			2	5													
x	3	1			x	3	1												
		5				2	5												
	2	0			7	5	0												
					<sub>1</sub>														
1	5	0			7	7	5												
6	0	0																	
7	7	5																	

In year 5 the children should be using a more formal written method of either the expanded or long multiplication method for 2-digit multiplication. Many children make errors with the use of the long multiplication method due to place value knowledge (for example it is  $30 \times 5$  not  $3 \times 5$ ). More examples and an explanation can be found in the activity section.

775

7)  $167 \times 19 =$

	1	6	7			1	6	7												
x	1	9				x	1	9												
		6	3			1	5	0	3											
						<sub>1</sub>	<sub>6</sub>	<sub>6</sub>												
	5	4	0			1	6	7	0											
	9	0	0			3	1	7	3											
						<sub>1</sub>														
		7	0																	
	6	0	0																	
1	0	0	0																	
3	1	7	3																	
<sub>2</sub>		<sub>1</sub>																		

Many children make errors with the use of the long multiplication method due to place value knowledge (for example it is  $10 \times 7$  and not  $1 \times 7$ ). More examples and an explanation can be found in the activity section.

3173

8)  $1098 \times 18 =$

	1	0	9	8			1	0	9	8	
	x		1	8			x		1	8	
			6	4			8	7	8	4	
		7	2	0		1	0	9	8	0	
				0		1	9	7	6	4	
	8	0	0	0			1	1			
			8	0							
		9	0	0							
				0							
1	0	0	0	0							
1	9	7	6	4							
		1	1								

In year 5, the children should be using a more formal written method of either the expanded or long multiplication method for 2-digit multiplication. More examples and an explanation can be found in the activity section.

19764

9) List all the factors of 32.

1, 2, 4, 8, 16, 32

Assess if the children have no understanding of the word factor or no strategies to ensure that they have all factor pairs possible. Such as, children may demonstrate understanding by stating some of the factors accurately but may not have listed all of them.

10) Circle all the numbers below that are factors of both 16 and 24.

7    1    5    8    2    3    4    6

11) write the next three multiples of 12:

36,

48,

60

72

84

12) Find the answer to the following question:

$$6^2 = 36$$

children should demonstrate understanding of the squared symbol ( $6 \times 6$ )

13) Find the answer to the following question:

$$3^3 = 27$$

children should demonstrate understanding of the cubed symbol ( $3 \times 3 \times 3$ )

14) 3 schools are going to a concert hall to perform at a show. They order 9 double decker buses to take all of the children. Each bus holds 78 people. How many people can go on the trip?



Children should show understanding that they are required to multiply 78 by 9 and have selected these amounts from the word problem.

$$\begin{array}{r} 78 \\ \times 9 \\ \hline 702 \\ \hline 77 \end{array}$$

702 people

15) Sonia sells her paintings online and sends them out to customers. She charges £49.50 delivery per order. Each painting costs £285. Harry orders 4 paintings. How much does he need to pay to Sonia?

$$\begin{array}{r} \times \quad 285 \\ \quad \quad 4 \\ \hline 1140 \\ \hline 32 \end{array}$$

$$\begin{array}{r} 1140.00 \\ + \quad 49.50 \\ \hline 1189.50 \\ \hline \end{array}$$



Children should demonstrate understanding that they need to work out how much the 4 paintings cost first and then add the £49.50 on afterwards. Some children may have added the £49.50 on to £285 and then multiplied by 4. If so, these children will need more support with selecting information from word problems.

Additionally, some children may demonstrate misconceptions with place value and adding a decimal amount to a whole number. Children may need a refresher on adding decimal amounts to whole numbers and more apply opportunities in this unit.

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