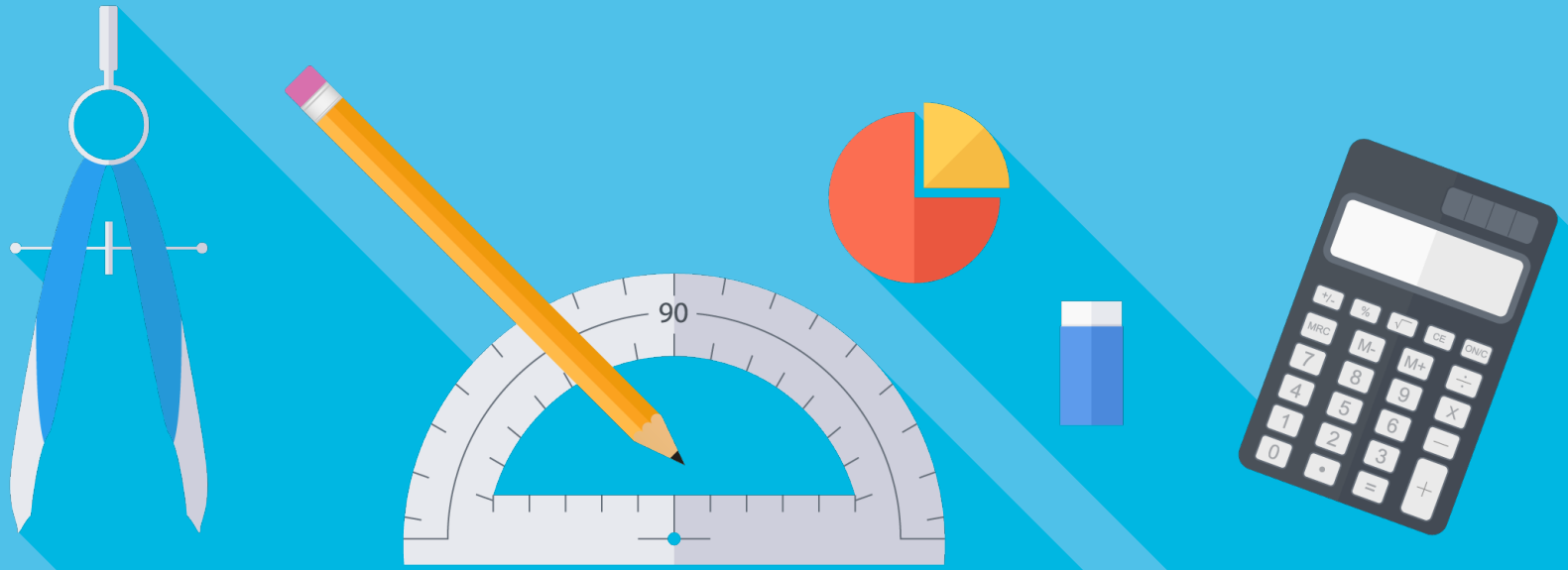
Monday Week 3

Maths Task



Multiplication

WALT: Using formal algorithms to solve multiplication equations.

1	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100

$$
\begin{array}{rr}
 & 83 \\
\times & 27 \\
\hline
 & 21 \\
 & 560 \\
 & 60 \\
 & 1600 \\
\hline
 & 2241
\end{array}
$$

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Eg.

$$\begin{array}{r} {}^{2}3^{3}168 \\ \times \quad 4 \\ \hline 12672 \\ \hline \end{array}$$

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Here are three formal multiplication calculations.

Are the answers and method correct? Explain any errors.

$$\begin{array}{r} 452 \\ \times \quad 3 \\ \hline 12156 \\ \hline \end{array} \qquad \begin{array}{r} 2084 \\ \times \quad 7 \\ \hline 14588 \\ \hline \end{array} \qquad \begin{array}{r} 3168 \\ \times \quad 4 \\ \hline 12442 \\ \hline \end{array}$$

Write some of your own calculations with mistakes for a partner.

Calculate the missing number using formal methods.

$$\begin{array}{r} _7_ \\ \times \quad 4 \\ \hline 2684 \\ \hline \end{array} \qquad \begin{array}{r} _0_4 \\ \times \quad 5 \\ \hline 45170 \\ \hline \end{array} \qquad \begin{array}{r} _936 \\ \times \quad _ \\ \hline 44_24 \\ \hline \end{array}$$

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Calculate the missing number using formal methods.

$$\begin{array}{r} 671 \\ \times \quad 4 \\ \hline 2684 \\ \hline \end{array} \qquad \begin{array}{r} 9034 \\ \times \quad 5 \\ \hline 45170 \\ \hline \end{array} \qquad \begin{array}{r} 4936 \\ \times \quad 9 \\ \hline 44424 \\ \hline \end{array}$$

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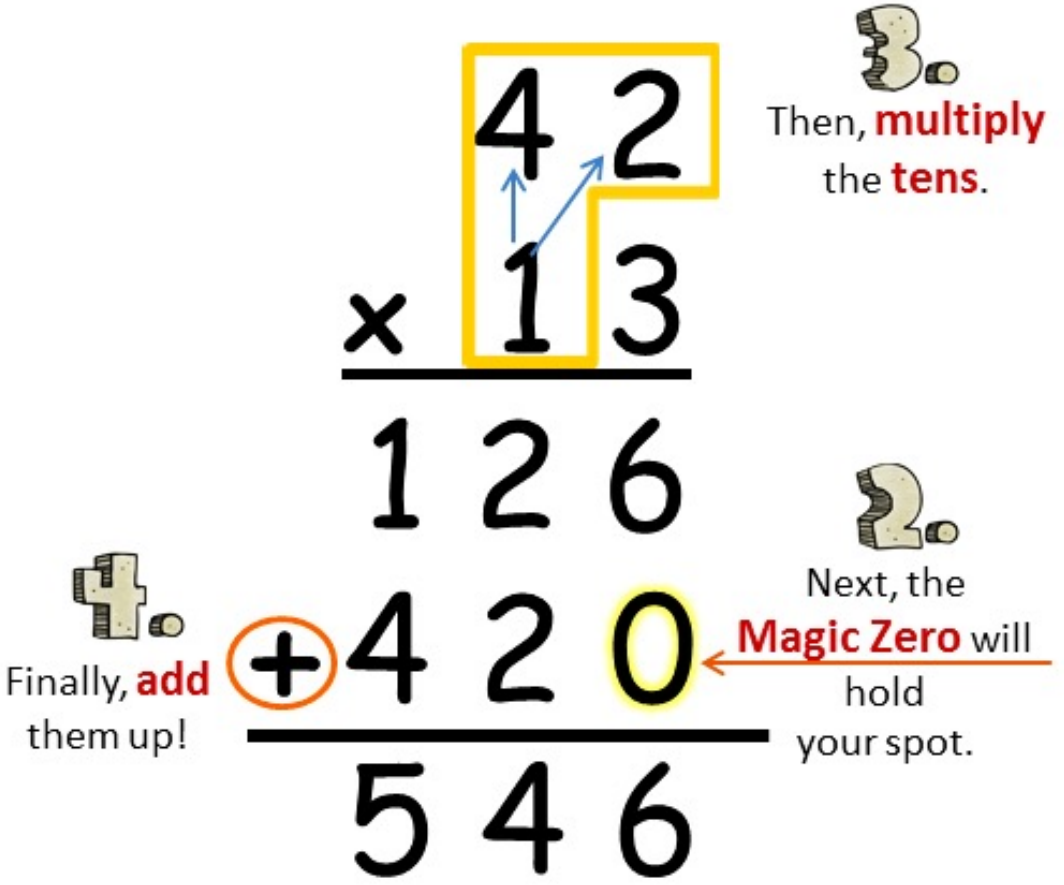
Magic Zero



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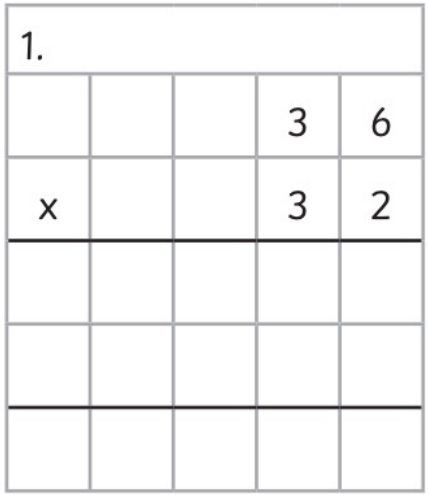
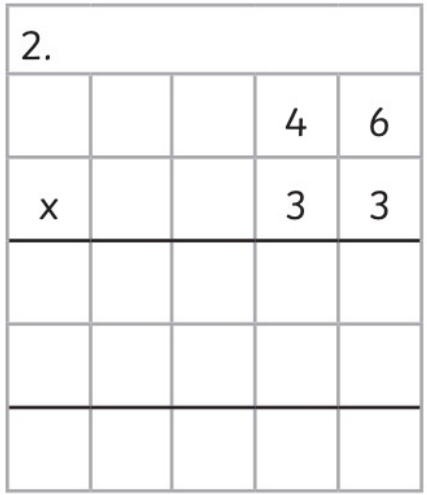
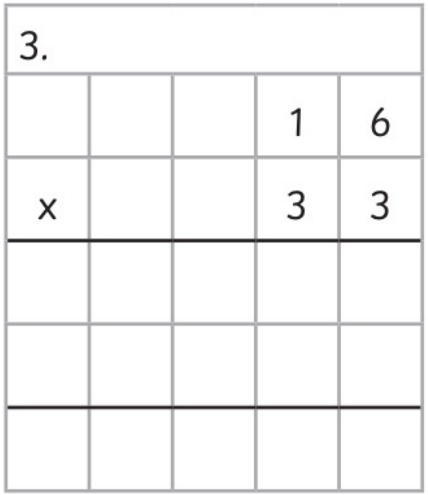
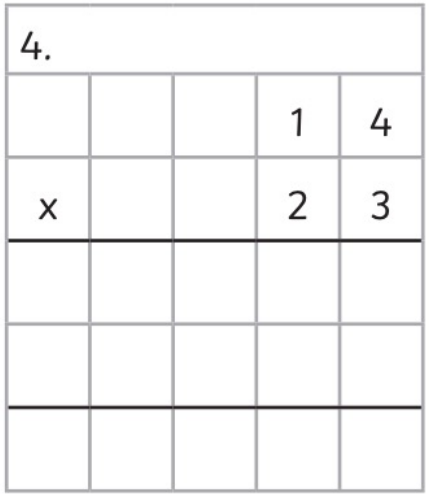
Your turn!









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1.

		1	1	
			3	6
x			3	2
			7	2
	1	0	8	0
	1	1	5	2

1

2.

		1	1	
			4	6
x			3	3
		1	3	8
	1	3	8	0
	1	5	1	8

1

3.

		1	1	
			1	6
x			3	3
			4	8
		4	8	0
		5	2	8

1

4.

		1	1	
			1	6
x			3	3
			4	2
		2	8	0
		3	2	2

1

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Complete these calculations:

_16_	7_05	_6_4
× 13	× _9	× 7_
9_01	64845	19_42
3_670	__4100	4629_0

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Complete these calculations:

3167	7205	6614
× 13	× 29	× 73
9501	64845	19842
31670	144100	462980
41171	208945	482822

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Missing Numbers

How many different solutions can you find to solve this missing number question?

$$\begin{array}{r} _36_ \\ \times \quad _ \\ \hline ___6 \end{array}$$

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Missing Numbers

2364 × 4 = 9456	4368 × 2 = 8736	1368 × 2 = 2736	9366 × 1 = 9366
1364 × 4 = 5456	3368 × 2 = 6736	1361 × 6 = 8166	

This can be repeated with any number of 1000s, so 8 more.

BLUE	RED	GREEN
Solve these multiplication questions using a formal algorithm: 1. 24 x 4 = 2. 22 x 5 = 3. 18 x 5 = 4. 26 x 3 = 5. 12 x 5 = 6. 48 x 2 = 7. 41 x 9 = 8. 31 x 7 = 9. 44 x 7 = 10. 32 x 7 =	Solve these multiplication questions using a formal algorithm: 1. 161 x 23 = 2. 232 x 36 = 3. 614 x 18 = 4. 969 x 95 = 5. 740 x 96 = 6. 362 x 58 = 7. 305 x 71 = 8. 370 x 64 = 9. 584 x 15 = 10. 851 x 89 =	Solve these multiplication questions using a formal algorithm: 1. 2190 x 69 = 2. 1342 x 52 = 3. 1521 x 73 = 4. 1143 x 34 = 5. 2468 x 27 = 6. 1895 x 46 = 7. 1462 x 70 = 8. 1239 x 19 = 9. 1359 x 77 = 10. 2127 x 38 =
Use a formal method to calculate the answers to these questions. 1. There are 38 boxes of cereal on a shelf. How many boxes on 5 shelves? 2. In the garden there is space for 18 rows of 32 seeds in a flower bed. How many seeds in a flower bed? 3. There are 35 rows of 14 dominoes. How many dominoes are there altogether?	Use a formal method to calculate the answers to these questions. 1. There are 25 rows of 18 stickers on a sheet. How many stickers are there on a sheet? How many on 10 sheets? 2. There are 17 biscuits in a packet and 3 packets in a box. A supermarket orders 15 379 boxes. How many biscuits will be in the 15 379 boxes? 3. A factory makes nine crates of 38628 pencils on each of the five working days of the week. How many pencils are made each week?	Use a formal method to calculate the answers to these questions. 1. A machine makes 60 802 bottle tops in a week. In a 52-week working year, how many bottle tops are made in a year? 2. Bags of potatoes contains an average of 33 potatoes. In a year, a farmer sells 58 716 bags. How many potatoes does she sell in one year? 3. A factory makes 63 957 nails each day. How many nails are made in January and February 2017, when the factory is open every day?

Extension Task

Be the Teacher

For this task, you are going to imagine you are the teacher.

Look at the calculations that Sonny has completed. Complete your own calculation next to them so you can work out whether Sonny's answers are correct or incorrect. Put a tick if it is correct and if it is wrong, put a cross and **explain** what mistake has been made. Give Sonny a mark out of 5 at the end.

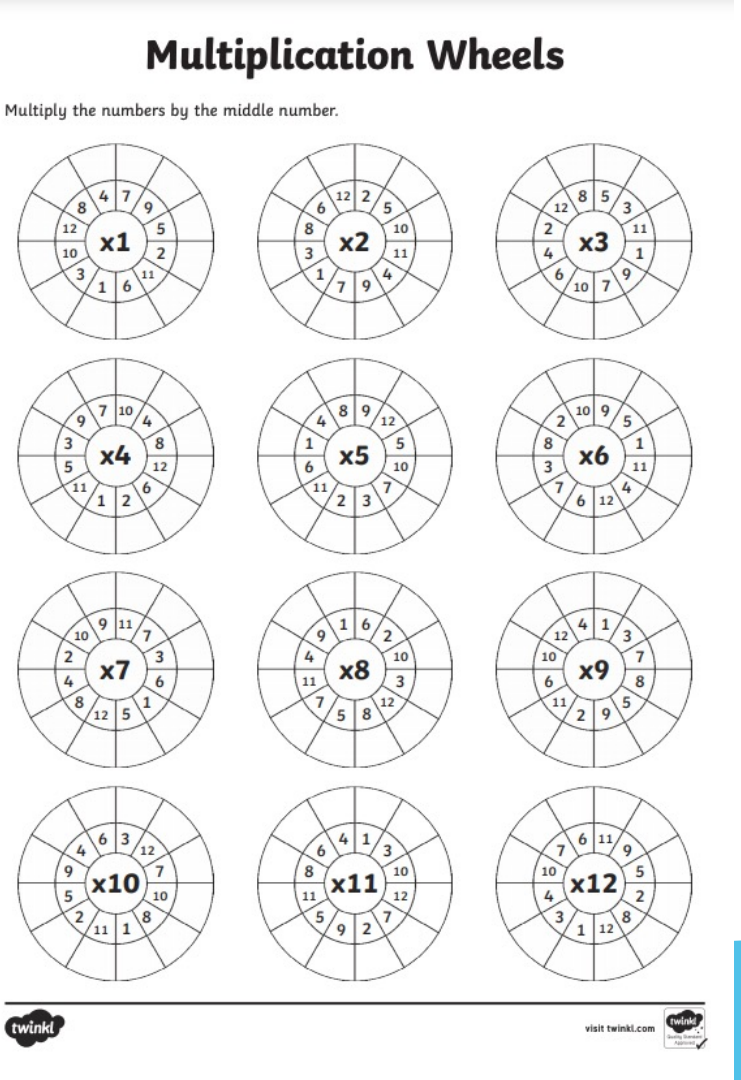
The first one has been done as an example.

		4	6	7	2					**4**	**6**	**7**	**2**	
	×			1	6				×			**1**	**6**	
	2	8	0	3	2				**2**	**8**	**0**	**3**	**2**	
	4	6	7	2	0				**4**	**6**	**7**	**2**	**0**	
	(6)	4	7	5	2	×			**7**	**4**	**7**	**5**	**2**	

Comment: 8 + 6 is 14 but you have forgotten to carry the 1 into the ten thousands column.

1.		5	6	3	4									
	×			2	3				×					
	1	6	9	0	2									
	1	1	2	6	8									
	2	8	1	7	0									

Comment:

Additional Task

Complete the ***Multiplication Wheels*** worksheet on the school website.