

Homework

Multiply by 10, 100 and 1,000 – Decimals

National Curriculum Objectives:

Mathematics Year 5: (5C6b) Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)

Developing Match the answer to the correct calculation when multiplying by 10, 100 and 1,000. Using decimal numbers; all questions have visual representation for support (e.g. Place value chart, Gattegno grid).

Expected Match the answer to the correct calculation when multiplying by 10, 100 and 1,000. Using numbers up to 3 decimal places.

Greater Depth Match the answer to the correct calculation when multiplying by 10, 100 and 1,000. Multi-step problems, using decimal numbers (e.g. $13.425 \times 10 \times 100 \times 10$).

Questions 2, 5 and 8 (Varied Fluency)

Developing Decide whether the statement is true or false and correct calculations when multiplying by 10, 100 and 1,000. Using decimal numbers; all questions have visual representation for support (e.g. Place value chart, Gattegno grid).

Expected Decide whether the statement is true or false and correct calculations when multiplying by 10, 100 and 1,000. Using numbers up to 3 decimal places.

Greater Depth Decide whether the statement is true or false and correct calculations when multiplying by 10, 100 and 1,000. Multi-step problems, using decimal numbers (e.g. $13.425 \times 10 \times 100 \times 10$).

Questions 3, 6 and 9 (Reasoning and Problem Solving)

Developing Decide whether a statement is correct and explain why when multiplying by 10, 100 and 1,000. Using decimal numbers; all questions have visual representation for support (e.g. Place value chart, Gattegno grid).

Expected Decide whether a statement is correct and explain why when multiplying by 10, 100 and 1,000. Using numbers up to 3 decimal places.

Greater Depth Decide whether a statement is correct and explain why when multiplying by 10, 100 and 1,000. Multi-step problems, using decimal numbers (e.g. $13.425 \times 10 \times 100 \times 10$).

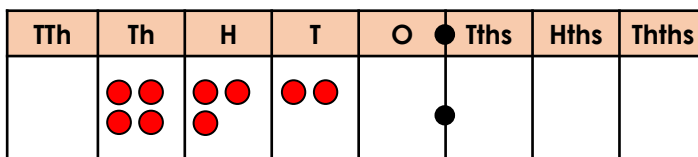
Multiply by 10, 100 and 1,000 – Decimals

1. Match the answers to the correct representation to find the odd one out.

A. 42.5×10

B. 43.2×100

C. $4.1 \times 1,000$



1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009



VF
HW/Ext

2. Tick to show whether the calculations below are true or false. Correct any false statements. Use the place value chart to help you.

A. $2.3 \times 10 = 2.30$

B. $36.5 \times 100 = 3,650$

C. $13.2 \times 1,000 = 13,200$

D. $315 \times 10 = 31.5$

True	False	TTh	Th	H	T	O	Tths
<input type="checkbox"/>	<input type="checkbox"/>						●
<input type="checkbox"/>	<input type="checkbox"/>						●
<input type="checkbox"/>	<input type="checkbox"/>						●
<input type="checkbox"/>	<input type="checkbox"/>						●



VF
HW/Ext

3. Hafsa has circled the numbers on the chart to represent the answer to the following calculation:

3.25×100

1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

Is she correct?

Explain how you know.



RPS
HW/Ext

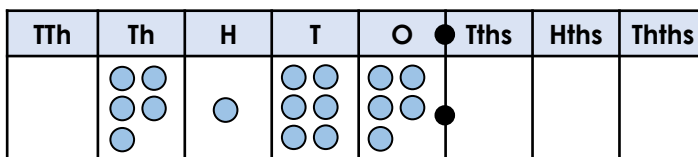
Multiply by 10, 100 and 1,000 – Decimals

4. Match the answers to the correct representation to find the odd one out.

A. 516.5×100

B. 51.65×10

C. $5.165 \times 1,000$



1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009



VF
HW/Ext

5. Tick to show whether the calculations below are true or false. Correct any false statements.

A. $345 \times 10 = 3,450$

True	False
<input type="checkbox"/>	<input type="checkbox"/>

B. $65.03 \times 1,000 = 6,503$

<input type="checkbox"/>	<input type="checkbox"/>
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C. $493.05 \times 100 = 4,930.5$

<input type="checkbox"/>	<input type="checkbox"/>
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D. $5.025 \times 1,000 = 5,025$

<input type="checkbox"/>	<input type="checkbox"/>
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VF
HW/Ext

6. Steph has circled the numbers on the chart to represent the answer to the following calculation:

4.35×100

1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

Is she correct?

Explain how you know.



RPS
HW/Ext

Multiply by 10, 100 and 1,000 – Decimals

7. Match the answers to the correct answer to find the odd one out.

A. $0.735 \times 1,000 \times 10$

73,505

B. $73.505 \times 10 \times 100$

7,305

C. $7.305 \times 100 \times 10$



VF
HW/Ext

8. Tick to show whether the calculations below are true or false. Correct any false statements.

A. $71.908 \times 10 \times 10 = 719.08$

True

False

B. $60.375 \times 10 \times 100 = 60,375$

C. $45.086 \times 100 \times 10 = 45,086$

D. $1.005 \times 100 \times 100 = 1,005$



VF
HW/Ext

9. Chuan has circled the numbers on the chart to represent the answer to the following calculation:

$0.385 \times 100 \times 10$

1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

Is he correct? Explain how you know.

Rewrite the calculation with one multiplier where the answer is the same.



RPS
HW/Ext

Homework

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Developing

1. A = 425, it matches to the place value chart; B = 4,320, it matches to the Gattegno chart; C is 4,100, it is the odd one out.
2. A is false, the answer is 23; B is true; C is true; D is false, the answer is 3,150.
3. She is incorrect. She has only moved the digits one place value column instead of two so each digit has only become 10 times bigger. The correct numbers she should have circled are 300, 20 and 5.

Expected

5. A = 51,650, it is the odd one out; B = 516.5, matches to the place value chart; C = 5,165, matches to the Gattegno chart.
6. A is true; B is false, the answer is 65,030; C is false, the answer is 49,305; D is true.
7. She is correct. She has moved the digits two place value columns so that each digit becomes 100 times bigger.

Greater Depth

7. A = 7,350, it is the odd one out; B = 73,505; C = 7,305.
8. A is false, the answer is 7,190.8; B is true; C is true; D is false, the answer is 10,050.
9. He is correct. He has moved the digits two place value columns then one more so that each digit has become 100 times bigger then 10 times bigger. $0.385 \times 1,000 = 385$.