Reasoning and Problem Solving
Step 11: Multiply by 10, 100 and 1,000

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 (Problem Solving)
Developing Choose the digit card to match the 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 Choose the digit card to match the calculation multiplying by 10, 100 and 1,000. Using numbers up to 3 decimal places.
Greater Depth Choose the digit card to match the calculation multiplying by 10, 100 and 1,000. Multi-step problems, using decimal numbers (e.g. 13.425 x 10 x 100 x 10).

Questions 2, 5 and 8 (Reasoning)
Developing Explain whether the statement is correct when multiplying by 10, 100 or 1,000. Using decimal numbers; all questions have visual representation for support (e.g. Place value chart, Gattegno grid).
Expected Explain whether the statement is correct when multiplying by 10, 100 or 1,000. Using numbers up to 3 decimal places.
Greater Depth Explain whether the 2 statements are correct when multiplying by 10, 100 or 1,000. Multi-step problems, using decimal numbers (e.g. 13.425 x 10 x 100 x 10).

Questions 3, 6 and 9 (Problem Solving)
Developing Complete the table multiplying 2 numbers by 10, 100 and 1,000. Using decimal numbers; all questions have visual representation for support (e.g. Place value chart, Gattegno grid).
Expected Complete the table multiplying 2 numbers by 10, 100 and 1,000. Using numbers up to 3 decimal places.
Greater Depth Complete the table multiplying 3 numbers by 10, 100 and 1,000. Multi-step problems, using decimal numbers (e.g. 13.425 x 10 x 100 x 10).

More Year 5 Decimals resources.

Did you like this resource? Don't forget to review it on our website.

Multiply by 10, 100 and 1,000

1a. Find the digit card that matches each calculation.

A. 8 x 1,000 = | 8.000 | 800 | 8,000 |

B. 36 x 100 = | 360 | 3,600 | 36.00 |

TTh	Th	H	T	O	Tths	Hths

D PS

2a. Asha multiplies 35 by 10.
She says,

The 5 will move from the ones column to the tenths column.

Is she correct? Explain why.

TTh	Th	H	T	O	Tths	Hths

D R

3a. Complete the table.

TTh	Th	H	T	O	Tths	Hths

	4	30
x 10		
x 100		
x 1,000		

D PS

Multiply by 10, 100 and 1,000

1b. Find the digit card that matches each calculation.

A. 500 x 10 = | 5,000 | 500.0 | 50.00 |

B. 12 x 1,000 = | 12.00 | 1,200 | 12,000 |

TTh	Th	H	T	O	Tths	Hths

D PS

2b. Orla multiplies 17 by 1,000.
She says,

The 1 will move from the tens column to the ten thousands column.

Is she correct? Explain why.

TTh	Th	H	T	O	Tths	Hths

D R

3b. Complete the table.

TTh	Th	H	T	O	Tths	Hths

	27	10
x 10		
x 100		
x 1,000		

D PS

Multiply by 10, 100 and 1,000

4a. Find the digit card that matches each calculation.

A. 2.831 x 10 = 0.2831 | 28.31 | 283.1

B. 1.34 x 100 = 1,340 | 134 | 1.340

C. 12.06 x 1,000 = 12,060 | 120.60 | 1,206

E PS

5a. Hallie multiplies 0.741 by 100.

She says,

The 4 will move from the hundredths column to the tens column.

Is she correct?
Explain why.

E R

6a. Complete the table.

	23.5	2.9
x 10		
x 100		
x 1,000		

E PS

Multiply by 10, 100 and 1,000

4b. Find the digit card that matches each calculation.

A. 70.1 x 100 = 7,001 | 700.1 | 7,010

B. 0.862 x 1,000 = 8,620 | 862 | 80.62

C. 11.9 x 10 = 11.90 | 110.9 | 119

E PS

5b. Hanif multiplies 1.03 by 1,000.

He says,

The 0 will move from the tenths column to the hundreds column.

Is he correct?
Explain why.

E R

6b. Complete the table.

	0.44	15.628
x 10		
x 100		
x 1,000		

E PS

Multiply by 10, 100 and 1,000

7a. Find the digit card that matches each calculation.

A. 22.08 x 10 = 22.08 | 22.080 | 220.8

B. 11.11 x 1,000 = 11,110.1 | 11,110 | 111,110

C. 1.909 x 10 = 1,909.0 | 190.09 | 19.09

D. 60.31 x 100 = 600.31 | 6,031 | 60,310

GD

PS

Multiply by 10, 100 and 1,000

7b. Find the digit card that matches each calculation.

A. 2.221 x 100 = 222.01 | 222.1 | 220.10

B. 0.908 x 1,000 = 9,080 | 908 | 90.080

C. 118.09 x 10 = 118.90 | 11,809 | 1,180.9

D. 100.01 x 100 = 10,001 | 100.010 | 100,010

GD

PS

8a. Claudia multiplies 3.102 by 10 and then by 100.
She says,

The 1 will move from the tenths column to the hundreds column and the 0 will move from the tenths column to the hundreds column.

Is she correct?
Explain why.

GD

R

8b. Fabian multiplies 100.793 by 10 and then by 10 again.
He says,

The 9 will move from the hundredths column to the tens column and the 3 will move from the thousandths column to the ones column.

Is he correct?
Explain why.

GD

R

9a. Complete the table.

	19.098	24.88	100.56
x 10			
x 100			
x 1,000			

GD

PS

9b. Complete the table.

	0.122	150.96	65.912
x 10			
x 100			
x 1,000			

GD

PS

Reasoning and Problem Solving
Multiply by 10, 100 and 1,000

Developing

1a. A. 8,000; B. 3,600

2a. No, because the 5 will move to the tens column.

3a.

	4	30
x 10	40	300
x 100	400	3,000
x 1,000	4,000	30,000

Expected

4a. A. 28.31; B. 134; C. 12,060

5a. No, because the 4 will move from the hundredths to the ones column.

6a.

	23.5	2.9
x 10	235	29
x 100	2,350	290
x 1,000	23,500	2,900

Greater Depth

7a. A. 220.8; B. 11,110; C. 19.09; D. 6,031

8a. No, because the 1 will move to the hundreds column and the 0 will move from the hundredths (not the tenths) to the tens column.

9a.

	19.098	24.88	100.56
x 10	190.98	248.8	1,005.6
x 100	1,909.8	2,488	10,056
x 1,000	19,098	24,880	100,560

Reasoning and Problem Solving
Multiply by 10, 100 and 1,000

Developing

1b. A. 5,000; B. 12,000

2b. Yes, she is correct.

3b.

	27	10
x 10	270	100
x 100	2,700	1,000
x 1,000	27,000	10,000

Expected

4b. A. 7,010; B. 862; C. 119

5b. Yes, he is correct.

6b.

	0.44	15.628
x 10	4.4	156.28
x 100	44	1,562.8
x 1,000	440	15,628

Greater Depth

7b. A. 222.1; B. 908; C. 1,180.9; D. 10,001

8b. No, because the 9 will move to the ones column and the 3 will move to the tenths column.

9b.

	0.122	150.96	65.912
x 10	1.22	1,509.6	659.12
x 100	12.2	15,096	6,591.2
x 1,000	122	150,960	65,912