Multiply by 10,100 and 1,000

Multiply by 10,100 and 1,000

1a. Romeo planted 412 trees.

M	HTh	TTh	Th	H	T	O

Hannah planted 100 times more trees than Romeo.

M	HTh	TTh	Th	H	T	O

How many trees did they plant altogether?

PS

1b. Josh read 245 pages of his book.

M	HTh	TTh	Th	H	T	O

Serena read 10 times more pages than Josh.

M	HTh	TTh	Th	H	T	O

How many pages have they read altogether?

PS

2a. The fruit represents a multiple of 10, 100 or 1,000.

x 4,315 = 4,315,000

M	HTh	TTh	Th	H	T	O

M	HTh	TTh	Th	H	T	O

What is the value of the fruit? Prove it.

R

2b. The shape represents a multiple of 10, 100 or 1,000.

8,120 = 812 x

M	HTh	TTh	Th	H	T	O

M	HTh	TTh	Th	H	T	O

What is the value of the shape? Prove it.

R

3a. Kara is matching calculations where numbers have been multiplied by either 10, 100 or 1,000 but she's jumbled up her cards. Find the matching pair.

M	HTh	TTh	Th	H	T	O

A. 63,700	B. 673	C. 673,000

Which number does not belong? Convince me.

R

3b. Rio is matching calculations where numbers have been multiplied by either 10, 100 or 1,000 but he's jumbled up his cards. Find the matching pairs.

M	HTh	TTh	Th	H	T	O

A. 9,189	B. 919,800	C. 918,900

Which number does not belong? Convince me.

R

classroomsecrets.co.uk

Reasoning and Problem Solving – Multiply by 10, 100 and 1,000 – Year 5 Developing

4a. Alfie sold 104 tickets.

Beth has sold 10 times as many tickets as Alfie.

Zac has sold 100 times as many tickets as Beth.

How many tickets have they sold altogether?

4b. Farmer A plants 216 seeds.

Farmer B plants 1,000 times more seeds than Farmer A.

Farmer C plants 100 times more seeds that Farmer A.

How many seeds do they plant altogether?

5a. Each fruit represents a multiple of 10, 100 or 1,000.

A. [apple] x 2,765 = 276,500

B. 302,090 = 30,209 x [banana]

C. 51,900 = 519 x [pear]

What is the value of each fruit? Prove it.

5b. Each shape represents a multiple of 10, 100 or 1,000.

A. [triangle] x 480 = 480,000

B. 2,070,500 = 20,705 x [square]

C. 48,160 = 4,816 x [circle]

What is the value of each shape? Prove it.

6a. Jack is matching calculations where numbers have been multiplied by either 10, 100 or 1,000 but he's jumbled up his cards. Find the matching pairs.

A. 664   B. 960

C. 9,600

D. 9,060   E. 66,400

Which number does not belong? Convince me.

6b. Monica is matching calculations where numbers have been multiplied by either 10, 100 or 1,000 but she's jumbled up her cards. Find the matching pairs.

A. 72,500   B. 70,200

C. 752

D. 702   E. 7,250

Which number does not belong? Convince me.

classroomsecrets.co.uk

Reasoning and Problem Solving – Multiply by 10, 100 and 1,000 – Year 5 Expected

7a. Jamie drives 2,450m. Then a further 2,050m.

Olivia drives 10 times further than Jamie.

Sasha drives 100 times further than Jamie.

How far have they driven between them in kilometres and metres?

GD

PS

7b. Charlie collects 15ml of rain water on Tuesday and 90ml on Wednesday.

Charlie's neighbour collects 1,000 times more rain water than Charlie.

Charlie's grandad collects 100 times more rain water than Charlie.

How many millilitres have they collected altogether?

GD

PS

8a. Each fruit represents a multiple of 10, 100 or 1,000.

A. x x 4,261 = 4,261,000

B. 960,500   =   9,605 x x

C. 311,700 = 3,117 x x

What is the value of each fruit? Prove it.

GD

R

8b. Each shape represents a multiple of 10, 100 or 1,000.

B. 960,500 = 9,605 x

A. x x 710 = 7,100,000

C. 2,060,000 = 2,060 x x

What is the value of each shape? Prove it.

GD

R

9a. Alice is matching calculations where numbers have been multiplied by either 10, 100 or 1,000 but she's jumbled up his cards. Find the matching pairs.

A. 55 tens and 4 ones

B. 5,400

C. 50 tens and 45 ones

D. 55,400

E. 545,000

Which number does not belong? Convince me.

GD

R

9b. Sam is matching calculations where numbers have been multiplied by either 10, 100, 1,000 but he's jumbled up his cards. Find the matching pairs.

A. 103,100

B. 100 tens and 45 ones

C. 104 tens and 1 one

D. 104,100

E. 10,450

Which number does not belong? Convince me.

GD

R

classroomsecrets.co.uk

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

Developing

1a. 41,612 trees.

2a. grapes = 1,000 because 4,4315 x 1,000 = 4,315,000

3a. A is the odd one out because 673 x 1,000 = 673,000

Expected

4a. 105,144 tickets.

5a. A. apple = 100 because 2,765 x 100 = 276,500

B. banana = 10 because 30,209 x 10 = 302,090

C. pear = 100 because 519 x 100 = 51,900

6a. D is the odd one out because 664 x 100 = 66,400 and 960 x 10 = 9,600

Greater Depth

7a. 499,500m which is 499.5km.

8a. A. apple = 10 if the banana = 100 or the apple = 100 if the banana = 10 because 10 x 100 x 4,261 = 4,261,000

B. peach and grapes = 10 because 9,605 x 10 x 10 = 960,500

C. strawberry = 10 and the pear = 10 because 3117 x 10 x 10 = 311,700

9a. B is the odd one out because 55 tens and 4 ones = 554 x 100 = 55,400 and 50 tens and 45 ones = 545 x 1,000 = 545,000

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

Developing

1b. 2,695 pages.

2b. circle = 10 because 812 x 10 = 8,120

3b. B is the odd one out because 9,189 x 100 = 918,900

Expected

4b. 237,816 seeds.

5b. A. triangle = 1,000 because 480 x 1,000 = 480,000

B. square = 100 because 20,705 x 100 = 2,070,500

C. circle = 10 because 4,816 x 10 = 48,160

6b. C is the odd one out because 7,250 x 10 = 72,500 and 702 x 100 = 70,200

Greater Depth

7b. 115,605ml.

8b. A. circle and triangle = 10 because 9,605 x 10 x 10 = 960,500

B. square = 10 if the trapezium = 1,000 or the square = 1,000 if the rectangle = 10 because 710 x 1,000 x 10 = 7,100,000

C. rectangle = 10 if the triangle = 100 or the rectangle = 100 if the triangle = 10 because 2,060 x 10 + 100 = 2,060,000

9b. A is the odd one out because 104 tens and 1 one x 100 = 104,100 and 100 tens and 45 ones x 10 = 10,450