

Reasoning and Problem Solving

Step 2: Multiply By 100

National Curriculum Objectives:

Mathematics Year 4:(4C6a) [Recall multiplication and division facts for multiplication tables up to \$12 \times 12\$](#)

Mathematics Year 4: (4C6b) [Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers](#)

Differentiation:

Questions 1, 4 and 7 (Reasoning)

Developing Explain why a calculation is correct or incorrect. Multiplying 1-digit numbers by 100.

Expected Explain why a calculation is correct or incorrect. Multiplying 2-digit numbers by 100.

Greater Depth Explain why a calculation is correct or incorrect. Multiplying 3-digit numbers by 100. Requires a deeper understanding of place value by also multiplying three numbers, for example, $451 \times 10 \times 10$.

Questions 2, 5 and 8 (Problem Solving)

Developing Choose the correct digit cards to solve the calculations. Multiplying 1-digit numbers by 10 and 100.

Expected Choose the correct digit cards to solve the calculations. Multiplying 2-digit numbers by 10 and 100.

Greater Depth Choose the correct digit cards to solve the calculations. Multiplying 3-digit numbers by 100 and by also multiplying three numbers, for example, $451 \times 10 \times 10$.

Questions 3, 6 and 9 (Reasoning)

Developing Explain a visual representation of multiplying a 1-digit number by 100.

Questions use Base 10 as visual support.

Expected Explain a visual representation of multiplying a 2-digit number by 100. Questions use Base 10 as visual support.

Greater Depth Explain a visual representation of multiplying a 3-digit number by 100.

Questions use a variety of manipulatives.

More [Year 4 Multiplication and Division](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

Multiply By 100

1a. Janice is going to order some pencils in boxes of 100. There are 250 pupils in the whole school.



I need to order
3 boxes.

Is Janice correct? Explain why.



R

Multiply By 100

1b. Jamila is going to order some rulers in boxes of 100. There are 650 pupils in the whole school.



I need to order
5 boxes.

Is Jamila correct? Explain why.



R

2a. Use the digit cards to complete the calculations. You can use each card more than once.

9

7

1

0

x

100

=

0

0

x

10

=

0



PS

2b. Use the digit cards to complete the calculations. You can use each card more than once.

2

1

8

0

x

100

=

0

0

x

10

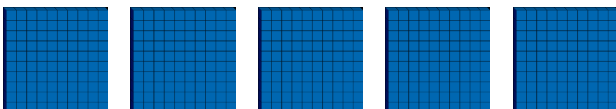
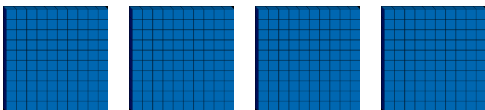
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0



PS

3a. Which number has been multiplied by 100 to give the answer represented below?

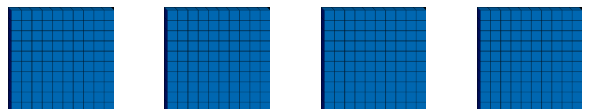
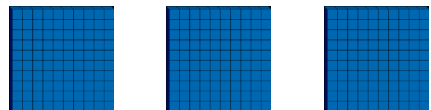


Explain how you know.



R

3b. Which number has been multiplied by 100 to give the answer represented below?



Explain how you know.



R

Multiply By 100

4a. Emily is going to order some pencils in boxes of 100. There are 1,850 pupils in the whole school.



I need to order 15 boxes.

Is Emily correct? Explain why.



R

Multiply By 100

4b. Reena is going to order some rulers in boxes of 100. There are 1,880 pupils in the whole school.



I need to order 18 boxes.

Is Reena correct? Explain why.



R

5a. Use the digit cards to complete the calculations. You can use each card more than once.



$$6 \square \times 100 = 6 \square 0 0$$

$$\square 0 \times 10 = \square \square 0$$



PS

5b. Use the digit cards to complete the calculations. You can use each card more than once.



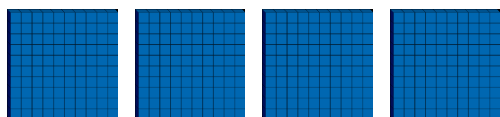
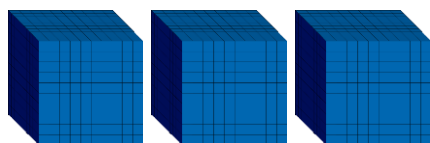
$$5 \square \times 100 = 5 \square 0 0$$

$$\square 1 \times 10 = \square \square 0$$



PS

6a. Which number has been multiplied by 100 to give the answer represented below?

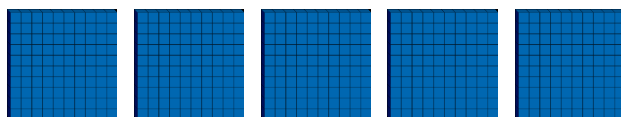
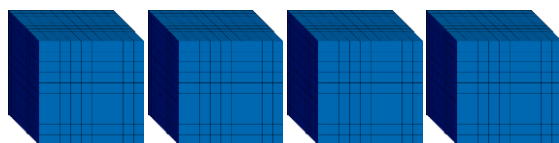


Explain how you know.



R

6b. Which number has been multiplied by 100 to give the answer represented below?



Explain how you know.



R

Multiply By 100

7a. Jake is going to order some pencils. The pencils come in packs of 10, with 10 packs in a box. There are 68,700 students in the whole college.



I need to order 680 boxes.

Is Jake correct? Explain why.



R

Multiply By 100

7b. George is going to order some rulers. The rulers come in packs of 10, with 10 packs in a box. There are 11,250 students in the whole college.



I need to order 113 boxes.

Is George correct? Explain why.



R

8a. Use the digit cards to complete the calculations. You can use each card more than once.



$$4 \square \square \times 100 = 4 \square \square 0 0$$

$$8 \square \square \times 10 \times 10 = \square \square \square \square 0$$



PS

8b. Use the digit cards to complete the calculations. You can use each card more than once.



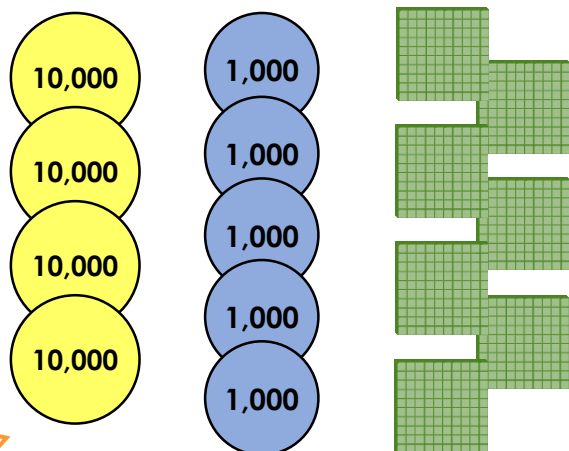
$$9 \square \square \times 100 = 9 \square \square 0 0$$

$$2 \square \square \times 10 \times 10 = \square \square \square \square 0$$



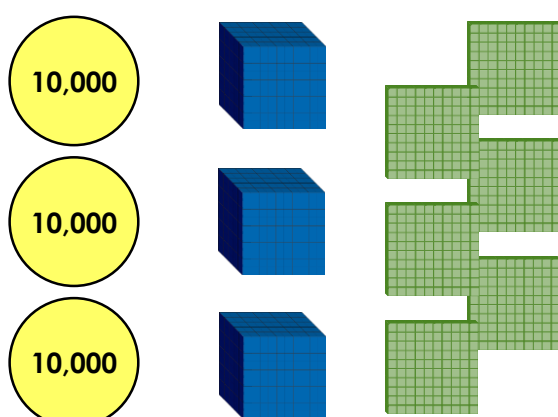
PS

9a. Which number has been multiplied by 100 to give the answer represented below? Explain how you know.



R

9b. Which number has been multiplied by 100 to give the answer represented below? Explain how you know.



R

Reasoning and Problem Solving

Multiply By 100

Developing

1a. Yes; $3 \times 100 = 300$

2a. Various answers, for example:

$9 \times 100 = 900$, $7 \times 100 = 700$, $1 \times 10 = 10$

3a. 9; $9 \times 100 = 900$

Expected

4a. No; $15 \times 100 = 1,500$ so she will not have enough.

5a. Various answers, for example:

$62 \times 100 = 6,200$, $30 \times 10 = 300$

6a. 34; $34 \times 100 = 3,400$

Greater Depth

7a. No; $680 \times 10 \times 10 = 68,000$ so he will not have enough.

8a. Various answers, for example:

$427 \times 100 = 42,700$, $827 \times 10 \times 10 = 82,700$

9a. 457; $457 \times 100 = 45,700$

Reasoning and Problem Solving

Multiply By 100

Developing

1b. No; $5 \times 100 = 500$ so she will not have enough.

2b. Various answers, for example:

$2 \times 100 = 200$, $8 \times 100 = 800$, $2 \times 10 = 20$

3b. 7; $7 \times 100 = 700$

Expected

4b. No $18 \times 100 = 1,800$ so she will not have enough.

5b. Various answers, for example:

$58 \times 100 = 5,800$, $81 \times 10 = 810$

6b. 45; $45 \times 100 = 4,500$

Greater Depth

7b. Yes; $113 \times 100 = 11,300$

8b. Various answers, for example:

$921 \times 100 = 92,100$, $285 \times 10 \times 10 = 28,500$

9b. 336; $336 \times 100 = 33,600$