

Homework/Extension

Step 3: Divide by 10, 100 and 1,000

National Curriculum Objectives:

Mathematics Year 6: (6F9a) [Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to three decimal places](#)

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)

Developing Divide by 10, 100 and 1,000 to complete the function machine. Includes numbers with up to 2 decimal places with some use of zero.

Expected Divide by 10, 100 and 1,000 to complete the function machine. Includes numbers with up to 3 decimal places with some use of zero.

Greater Depth Divide by 10, 100 and 1,000 to complete the function machine. Includes numbers with up to 3 decimal places where numbers include zero. Some questions include dividing by multiples of these numbers.

Questions 2, 5 and 8 (Varied Fluency)

Developing Identify and correct an error when dividing by 10, 100 and 1,000. Includes numbers with up to 2 decimal places with some use of zero.

Expected Identify and correct an error when dividing by 10, 100 and 1,000. Includes numbers with up to 3 decimal places with some use of zero. Some conversion between units of measure included.

Greater Depth Use knowledge of dividing by 10, 100 and 1,000 to solve problems. Includes numbers with up to 3 decimal places where numbers include zero. Some questions include dividing by multiples of these numbers. Conversion between units of measure included.

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

Developing Use knowledge of dividing by 10, 100 and 1,000 to find different ways of making a target number. Includes numbers with up to 3 decimal places with some use of zero. Place value chart provided for support.

Expected Use knowledge of dividing by 10, 100 and 1,000 to find different ways of making a target number. Includes numbers with up to 3 decimal places with some use of zero.

Greater Depth Use knowledge of multiplying and dividing by 10, 100 and 1,000 to find different ways of making a target number. Includes numbers with up to 3 decimal places where numbers include zero. Some questions include dividing by multiples of these numbers.

More [Year 6 Decimals](#) resources.

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

Divide by 10, 100 and 1,000

1. Follow the instructions on each function machine to complete the calculations.

45

16

●
■
■

■
■

÷ 10

■
■
■
■
■

2.3

2,910

3,920

●
■
■

■
■

÷ 1,000

■
■
■
■
■

7.25

756

1,453

●
■
■

■
■

÷ 100

■
■
■
■
■

0.34



VF
HW/Ext

2. Circle the incorrect calculation in each row and write the correction in the box.

			Corrections	
A.	$44 \div 10 = 4.4$	$8,300 \div 1,000 = 8.3$	$67 \div 100 = 6.7$	
B.	$329 \div 100 = 3.29$	$5,220 \div 1,000 = 52.2$	$94 \div 10 = 9.4$	
C.	$482 \div 10 = 4.82$	$1,827 \div 100 = 18.27$	$3,710 \div 1,000 = 3.71$	



VF
HW/Ext

3. Using the digit cards below and a starting number of your own, record 3 different ways of making 1.24.

÷

10

100

1,000

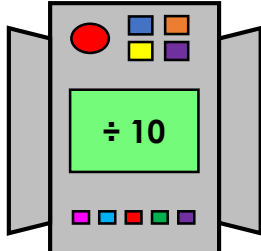
Thousands	Hundreds	Tens	Ones		Tenths	Hundredths
				●		
				●		
				●		
				●		



RPS
HW/Ext

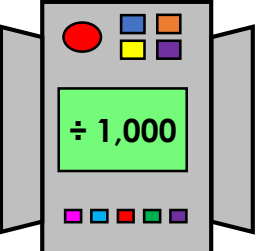
Divide by 10, 100 and 1,000

4. Follow the instructions on each function machine to complete the calculations.



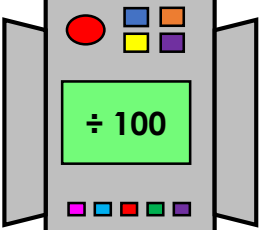
Input: 23, 407,
 Output:
 0.164

Function: $\div 10$



Input: 403,
 Output: 1.076,
 2,456

Function: $\div 1,000$



Input:
 169,
 Output: 78.53,
 0.572

Function: $\div 100$



VF
HW/Ext

5. Circle the incorrect calculation or conversion in each row and write the correction in the box.

A. 7,304cm = 73.04m 945 \div 1,000 = 9.45 3,608 \div 10 = 360.8

Corrections

B. 2.03 \div 10 = 0.23 634p = £6.34 234 \div 1,000 = 0.234

C. 4,006 \div 1,000 = 4.006 543 \div 10 = 54.3 450cm = 4.05m



VF
HW/Ext

6. Using the digit cards below and a starting number of your own, record 3 different ways of making 1.065.

÷

10

100

1,000



RPS
HW/Ext

Divide by 10, 100 and 1,000

7. Identify the instructions on each function machine and complete the calculations.

4,880		
6,240		3.12
8,048		

6,732		
		6.75
1,905		19.05

64.8		3.24
		2.01
824.6		



VF
HW/Ext

8. Calculate the answers to the problems below.

Answers

A. Rosie has 560g of chocolate. If she eats 0.19kg, how many kg of chocolate does she have left?

B. How much more is $8,628 \div 2,000$ than $42.5 \div 10$?

C. Rob walks 295m ten times a week. Susie walks 143m twenty times a week. How much further does Rob walk than Susie in km?



VF
HW/Ext

9. Using the digit cards below and a starting number of your own (with no more than 3 decimal places), record 3 different ways of making 3.2.

x	÷	30	300	3,000
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RPS
HW/Ext

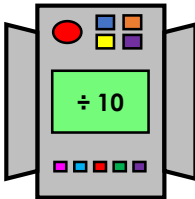
Homework/Extension

Divide by 10, 100 and 1,000

Developing

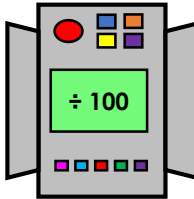
1.

45
23
16



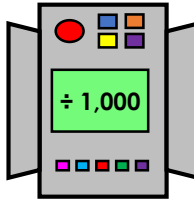
4.5
2.3
1.6

34
756
1,453



0.34
7.56
14.53

2,910
3,920
7,250



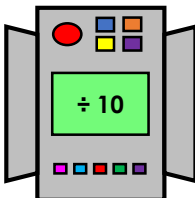
2.91
3.92
7.25

2. A: $67 \div 100 = 6.7$ is incorrect. The correct answer is 0.67.
 B: $5,220 \div 1,000 = 52.2$ is incorrect. The correct answer is 5.22.
 C: $482 \div 10 = 48.2$ is incorrect. The correct answer is 48.2.
 3. $12.4 \div 10 = 1.24$, $124 \div 100 = 1.24$, $1,240 \div 1,000 = 1.24$

Expected

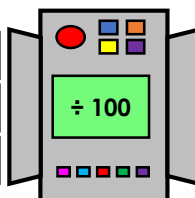
4.

23
407
1.64



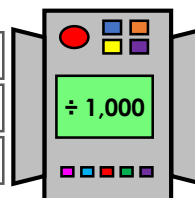
2.3
40.7
0.164

7,853
169
57.2



78.53
1.69
0.572

403
1,076
2,456



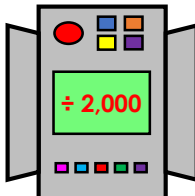
0.403
1.076
2.456

5. A: $945 \div 1,000 = 9.45$ is incorrect. The correct answer is 0.945.
 B: $2.03 \div 10 = 0.203$ is incorrect. The correct answer is 0.203.
 C: $450\text{cm} = 4.05\text{m}$ is incorrect. The correct answer is 4.5m.
 6. $10.65 \div 10 = 1.065$, $106.5 \div 100 = 1.065$, $1,065 \div 1,000 = 1.065$

Greater Depth

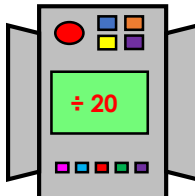
7.

4,880
6,240
8,048



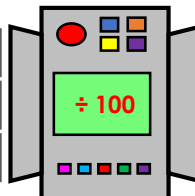
2.44
3.12
4.024

64.8
40.2
824.6



3.24
2.01
41.23

6,732
675
1,905



67.32
6.75
19.05

8. A: 0.37kg, B: 0.064, C: 0.09km
 9. Various answers, for example: $96 \div 30 = 3.2$, $960 \div 300 = 3.2$, $9,600 \div 3,000 = 3.2$, $0.32 \times 10 = 3.2$, $0.032 \times 100 = 3.2$