

Homework/Extension

Step 1: Three Decimal Places

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](#)

Mathematics Year 6: (6F10) [Solve problems which require answers to be rounded to specified degrees of accuracy](#)

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)

Developing Use understanding of place value in numbers with up to 3 decimal places to identify if numbers are ordered correctly. Includes no exchanging. Place value counters used for support. No use of zero.

Expected Use understanding of place value in numbers with 3 decimal places to identify if numbers are ordered correctly. Some problems include exchanging. Place value counters used for support. Some use of zero.

Greater Depth Use understanding of place value in numbers with 3 decimal places to identify if numbers are ordered correctly. Problems include exchanging. Some use of zero. No pictorial representation.

Questions 2, 5 and 8 (Varied Fluency)

Developing Understand the value of each digit in numbers with up to 3 decimal places. Includes no exchanging. Place value counters used for support. No use of zero.

Expected Understand the value of each digit in numbers with 3 decimal places. Some problems include exchanging. Place value counters used for support. Some use of zero.

Greater Depth Understand the value of each digit in numbers with 3 decimal places. Problems include exchanging. Some use of zero. No pictorial representation.

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

Developing Use understanding of place value in numbers with up to 2 decimal places to create numbers larger and smaller than given numbers. Includes no exchanging and no use of zero.

Expected Use understanding of place value in numbers with 3 decimal places to create numbers larger and smaller than given numbers. Includes use of zero.

Greater Depth Use understanding of place value in numbers with 3 decimal places to create numbers larger and smaller than given numbers. Includes exchanging and use of zero.

More [Year 6 Decimals](#) resources.

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Three Decimal Places

1. True or false? The numbers below have been ordered correctly from smallest to largest.

Smallest _____ **Largest**

A.

Diagram A shows a triangular arrangement of circles representing a geometric sequence. The top row has four circles: 1 (purple), 0.1 (blue), 0.01 (green), and 0.001 (orange). The second row has two circles: 1 (purple) and 0.1 (blue). The third row has one circle: 0.1 (blue). The fourth row has four circles: 0.001 (orange), 0.001 (orange), 0.001 (orange), and 0.001 (orange).

B.

1	0.1	0.01	0.001
1	0.1	0.01	0.001
1	0.1		0.001

The diagram illustrates a probability distribution across four columns. The first column has three circles labeled '1'. The second column has three circles labeled '0.1'. The third column has two circles labeled '0.01'. The fourth column has four circles labeled '0.001'. The circles are colored: purple for '1', blue for '0.1', green for '0.01', and orange for '0.001'.

C.

1	0.1	0.01	0.001
1	0.1	0.01	0.001
1	0.1	0.01	
	0.1	0.01	

VF
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2. Circle the representation in each row which has the largest number of tenths.

A. 4.436

The diagram illustrates the decomposition of the number 1.0 into its constituent parts. The top row shows the original components: two 1s, three 0.1s, one 0.01, and one 0.001. The bottom row shows a different grouping: two 1s, two 0.1s, two 0.01s, and one 0.001. This visualizes how the value of 0.1 is split into two 0.05s (though labeled as 0.1 in the image), and how the value of 0.01 is split into two 0.005s (though labeled as 0.01 in the image).

The diagram illustrates a probability distribution across two rows. The top row contains seven circles with values 1, 1, 0.1, 0.1, 0.01, 0.01, and 0.001. The bottom row contains seven circles with values 1, 1, 0.1, 0.01, 0.01, 0.01, and 0.001. The circles are colored in a gradient from purple to orange, corresponding to the values.

B. 2.371

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HW/Ext

3. Use the digit cards to create a number that is larger than Tara's but smaller than Albert's. Find 1 more solution.

Tara's number
is 1.36.



4

1

2

8

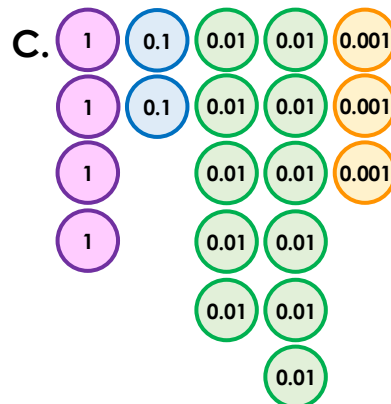
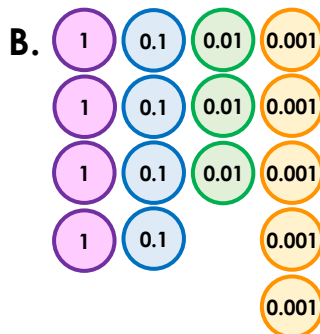
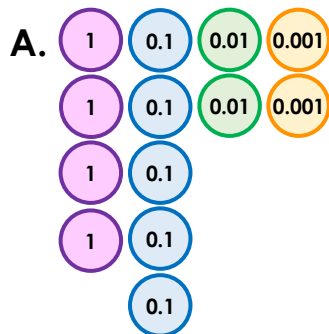
**Albert's number
is 1.59.**

RPS
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Three Decimal Places

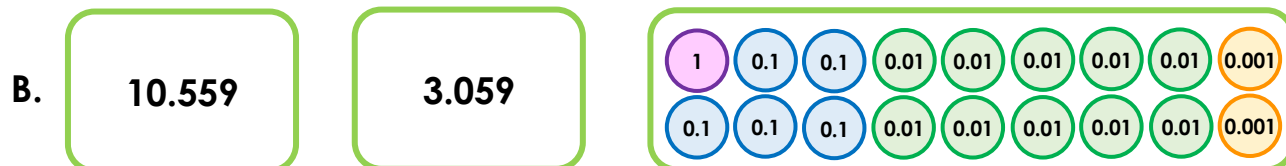
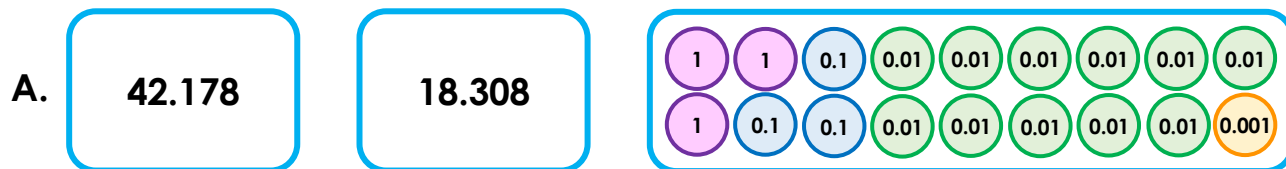
4. True or false? The numbers below have been ordered correctly from smallest to largest.

Smallest \longrightarrow Largest



VF
HW/Ext

5. Circle the representation in each row which has the largest number of tenths.



VF
HW/Ext

6. Use the digit cards to create a number that is larger than Milly's but smaller than Jamie's. Find 2 more solutions.

Milly's number is 3.015.



5

3

1

2

Jamie's number is 3.267.



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RPS
HW/Ext

Three Decimal Places

7. True or false? The numbers below have been ordered correctly from smallest to largest.

Smallest → Largest

A. 5 ones, 5 tenths,
seventeen
hundredths and
9 thousandths

B. 5 ones, 5 tenths,
4 hundredths
and 14
thousandths

C. 4 ones, 15
tenths, 6
hundredths and
4 thousandths



VF
HW/Ext

8. Circle the number in each row which has the largest number of hundredths.

A. $30 + 4 + 0.6 + 0.08 + 0.015$

567.009

8 ones, zero tenths,
4 hundredths and
12 thousandths

B. 2 tens, zero ones, 9
tenths, 5
hundredths and 14
thousandths

$100 + 6 + 0.5 + 0.04 + 0.017$

0.076



VF
HW/Ext

9. Use the digit cards to create a number that is larger than Jorelle's but smaller than Jun's. Find 3 solutions.

$7 + 0.5 + 0.15 + 0.003$



5 6 7 0 6 8

Seven ones and
six hundred and
sixty-five thousandths



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Three Decimal Places

Developing

1. **True**
2. **A. 4.532, B. 2.444**
3. **1.42 or 1.48**

Expected

4. **False – the correct order is C, B, A.**
5. **A. 3.411, B. 1.602**
6. **Various answers, for example: 3.125, 3.152, 3.215, 3,251**

Greater Depth

7. **False – the correct order is B, C and A.**
8. **A. 34.695, B. 0.076**
9. **7.656, 7.658 and 7.660**