

# Varied Fluency

## 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:

**Developing** Questions to support understanding place value in numbers with up to 3 decimal places, describing columns in words and digits. Problems do not include conversion. Representations of counters in place value charts.

**Expected** Questions to support understanding place value in numbers with 3 decimal places, describing columns in words and digits. Some problems require conversion. Representations of counters or base ten in place value charts.

**Greater Depth** Questions to support understanding place value in numbers with 3 decimal places, describing columns in words and digits. Problems require conversion. Representations of counters, base ten or place value charts.

More [Year 6 Decimals](#) resources.

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## Three Decimal Places

1a. Convert the number in the place value chart to digits.

Tens	Ones	Tenths	Hundredths
10	1 1 1 1 1 1	0.1 0.1 0.1 0.1 0.1 0.1	0.01 0.01 0.01



VF

## Three Decimal Places

1b. Convert the number in the place value chart to digits.

Tens	Ones	Tenths	Hundredths
10 10 10 10	1 1 1 1 1 1 1 1	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.01 0.01 0.01 0.01 0.01



VF

2a. Represent a number which has nine ones, five tenths, six hundredths and two thousandths.

Tens	Ones	Tenths	Hundredths	Thousandths



VF

2b. Represent a number which has five tens, two ones, six tenths, eight hundredths and five thousandths.

Tens	Ones	Tenths	Hundredths	Thousandths



VF

3a. In which number does the digit 7 have the lowest value?

7.62

1.07

0.73



VF

3b. In which number does the digit 2 have the highest value?

12.03

543.02

29.34



VF

4a. Use the digit cards to create the greatest and smallest number possible.

2 3 4 1

Tens	Ones	Tenths	Hundredths



VF

4b. Use the digit cards to create the greatest and smallest number possible.

8 9 9 7

Tens	Ones	Tenths	Hundredths



VF

## Three Decimal Places

5a. Convert the number in the place value chart to digits.

Tens	Ones	Tenths	Hundredths	Thousandths
10	1 1 1	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.01	0.001



VF

## Three Decimal Places

5b. Convert the number in the place value chart to digits.

Tens	Ones	Tenths	Hundredths	Thousandths
4	4 1	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.01 0.01 0.01 0.01 0.01 0.01	0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001



VF

6a. Represent a number which has seven tens, no ones, eight tenths, nine hundredths and seven thousandths.

10s	1s	0.1s	0.01s	0.001



VF

6b. Represent a number which has five tens, three ones, six tenths, eight hundredths and two thousandths.

10s	1s	0.1s	0.01s	0.001



VF

7a. In which number does the digit 8 have the highest value?

27.038

8.413

12.834



VF

7b. In which number does the digit 9 have the lowest value?

78.933

413.09

9.408



VF

8a. Use the digit cards to create the greatest and smallest number possible.

7 0 9 1 9

Tens	Ones	Tenths	Hundredths	Thousandths



VF

8b. Use the digit cards to create the greatest and smallest number possible.

2 8 3 5 9

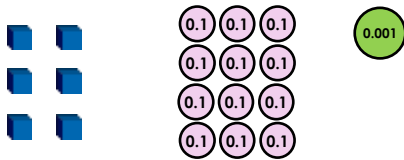
Tens	Ones	Tenths	Hundredths	Thousandths



VF

## Three Decimal Places

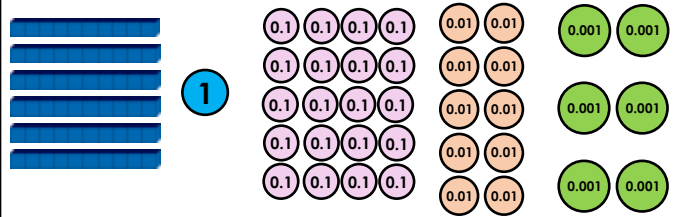
9a. Convert the number represented below to digits.



VF

## Three Decimal Places

9b. Convert the number represented below to digits.



VF

10a. Convert 2,737cm to m and represent the answer on the place value chart below:

10s	1s	0.1s	0.01s	0.001



VF

10b. Convert 4,652g to kg and represent the answer on the place value chart below:

10s	1s	0.1s	0.01s	0.001



VF

11a. In which number does the digit 4 have the lowest value?

4kg 386g

3.24kg

2,482g



VF

11b. In which number does the digit 1 have the highest value?

3.621km

3.15m

2km 513m



VF

12a. Use the digit cards to create the greatest and smallest number possible.



You must use one digit twice.




VF

12b. Use the digit cards to create the greatest and smallest number possible.



You must use two digits twice.








VF

## Varied Fluency Three Decimal Places

### Developing

1a. **16.63**

2a. Children may use digits or counters to show **9.562**

Ones	Tenths	Hundredths	Thousandths
			





3a. **1.07**, the digit 7 is worth 7 hundredths.

4a. Largest: **43.21**, Smallest: **12.34**

### Expected

5a. **24.211**

6a. Children may use digits or counters to show **70.897**

10s	1s	0.1s	0.01s	0.001s
				






7a. **8.413**, the digit 8 is worth 8 ones.

8a. Largest: **99.71**, Smallest: **1.799**

### Greater Depth

9a. **7.201**

10a. Children may use digits or counters to show **27.37**

10s	1s	0.1s	0.01s	0.001s
				

11a. **3.24kg**, the digit 4 is worth 40g.

12a. Largest: **99.1 (99.100)**,






Smallest: **0.199 (00.199)**

## Varied Fluency Three Decimal Places

### Developing

1b. **48.94**

2b. Children may use digits or counters to show **52.685**

Tens	Ones	Tenths	Hundredths	Thousandths
				






3b. **29.34**, the digit 2 is worth 2 tens.

4b. Largest: **99.87**, Smallest: **78.99**

### Expected

5b. **56.971**

6b. Children may use digits or counters to show **53.682**

10s	1s	0.1s	0.01s	0.001s
				






7b. **413.09**, the digit 9 is worth 9 hundredths.

8b. Largest: **98.532**, Smallest: **23.589**

### Greater Depth

9b. **63.106**

10b. Children may use digits or counters to show **4.652**

10s	1s	0.1s	0.01s	0.001s
				

11b. **2km 513m**, the digit 1 is worth 10m

12b. Largest: **887.2 (887.20)**,

Smallest: **0.278 (00.278)**