

# Varied Fluency

## Step 7: Adding – Different Decimal Places

### National Curriculum Objectives:

Mathematics Year 5: (5F10) [Solve problems involving number up to 3dp.](#)

Mathematics Year 5: (5M9a) [Use all four operations to solve problems involving measure \[for example, length, mass, volume, money\] using decimal notation, including scaling.](#)

### Differentiation:

**Developing** Questions to support adding different decimal places. Using tenths and hundredths with minimal exchanges.

**Expected** Questions to support adding different decimal places. Using tenths, hundredths and thousandths with some exchanges.

**Greater Depth** Questions to support adding different decimal places. Using tenths, hundredths and thousandths with multiple exchanges.

More [Year 5 Decimals](#) resources.

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

## Adding – Different Decimal Places

1a. Represent this addition on the place value chart  $2.17 + 0.5$

	ones	tenths	hundredths	thousandths
		●		
+		●		

Now calculate their sum.



VF

## Adding – Different Decimal Places

1b. Represent this addition on the place value chart  $3.2 + 4.01$

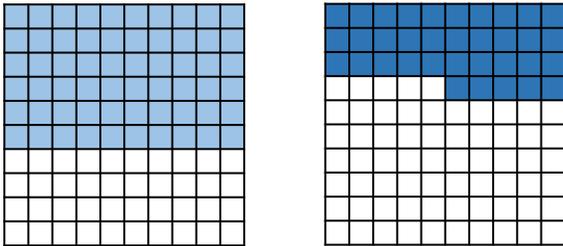
	ones	tenths	hundredths	thousandths
		●		
+		●		

Now calculate their sum.



VF

2a. Look at the hundred square below. Coloured squares represent 0.01.



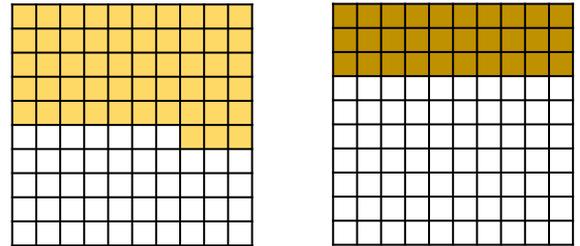
Convert to a column addition and complete the calculation.

		●	
+		●	
		●	



VF

2b. Look at the hundred square below. Coloured squares represent 0.01.



Convert to a column addition and complete the calculation.

		●	
+		●	
		●	



VF

3a. Without calculating the answer which estimate seems most sensible?

$$2.01 + 1.93$$

3

4

2



VF

3b. Without calculating the answer which estimate seems most sensible?

$$2.22 + 9.99$$

12.2

11.2

11.9



VF

4a. Calculate the following and order the sum of the calculations from smallest to largest.

A.  $0.29 + 2.09$

B.  $0.32 + 1.9$

C.  $2.1 + 1.22$



VF

4b. Calculate the following and order the sum of the calculations from smallest to largest.

A.  $3.01 + 2.5$

B.  $6.02 + 1.7$

C.  $5.7 + 2.99$



VF

## Adding – Different Decimal Places

5a. Represent this addition on the place value chart  $2.67 + 1.5$

	ones	tenths	hundredths	thousandths
		●		
+		●		

Now calculate their sum.



VF

## Adding – Different Decimal Places

5b. Represent this addition on the place value chart  $6.32 + 2.801$

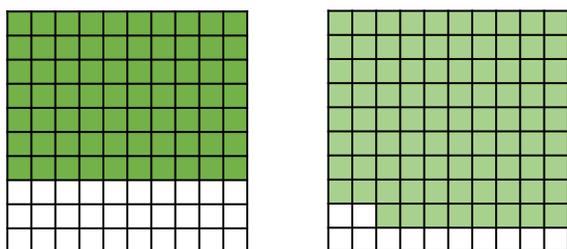
	ones	tenths	hundredths	thousandths
		●		
+		●		

Now calculate their sum.



VF

6a. Look at the hundred square below. Coloured squares represent 0.01.



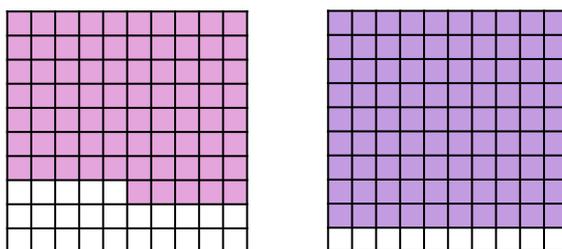
Convert to a column addition and complete the calculation.

		●		
+		●		
		●		



VF

6b. Look at the hundred square below. Coloured squares represent 0.01.



Convert to a column addition and complete the calculation.

		●		
+		●		
		●		



VF

7a. Without calculating the answer which estimate seems most sensible?

$$2.01 + 1.93$$

4.2

4.12

4



VF

7b. Without calculating the answer which estimate seems most sensible?

$$2.22 + 9.99$$

12.2

12.4

12.5



VF

8a. Calculate the following and order the sum of the calculations from smallest to largest.

A.  $3.1 + 6.89$

B.  $4.91 + 5.231$

C.  $2.8 + 8.12$

D.  $1.7 + 9.201$



VF

8b. Calculate the following and order the sum of the calculations from smallest to largest.

A.  $0.321 + 4.89$

B.  $3.51 + 1.652$

C.  $5.01 + 0.9$

D.  $3.4 + 2.65$



VF

## Adding – Different Decimal Places

9a. Represent this addition on the place value chart  $5.87 + 3.3$

ones	tenths	hundredths	thousandths
	●		
+	●		

Now calculate their sum.



VF

## Adding – Different Decimal Places

9b. Represent this addition on the place value chart  $7.03 + 2.701$

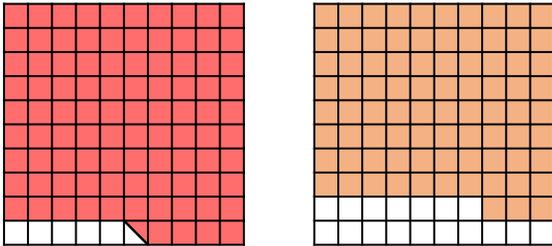
ones	tenths	hundredths	thousandths
	●		
+	●		

Now calculate their sum.



VF

10a. Look at the hundred square below. Coloured squares represent 0.01.



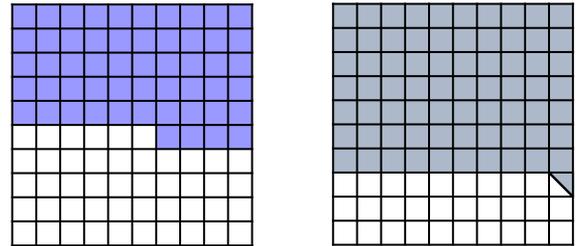
Convert to a column addition and complete the calculation.

		●		
+		●		
		●		



VF

10b. Look at the hundred square below. Coloured squares represent 0.01.



Convert to a column addition and complete the calculation.

		●		
+		●		
		●		



VF

11a. Without calculating the answer which estimate seems most sensible?

$$6.901 + 7.07$$

13.9

12

14



VF

11b. Without calculating the answer which estimate seems most sensible?

$$4.9 + 12.099$$

16

16.9

17



VF

12a. Calculate the following and order the sum of the calculations from smallest to largest.

A.  $7.39 + 5.731$

B.  $1.93 + 9.015$

C.  $3.2 + 8.781$

D.  $5.9 + 6.189$



VF

12b. Calculate the following and order the sum of the calculations from smallest to largest.

A.  $12.529 + 5.09$

B.  $9.352 + 7.19$

C.  $13.1 + 4.972$

D.  $15.32 + 2.074$



VF

## Varied Fluency

### Adding – Different Decimal Places

#### Developing

1a.

ones	tenths	hundredths	thousandths
● ●	●	●●●●	
+	●	●●●	

$$2.17 + 0.5 = 2.67$$

$$2a. 0.6 + 0.35 = 0.95$$

$$3a. 4$$

$$4a. A = 2.38, B = 2.22, C = 3.32. \text{ Order: } B, A, C.$$

#### Expected

5a.

ones	tenths	hundredths	thousandths
● ●	●●●●	●●●●	
+	●	●●●	

$$2.67 + 1.5 = 4.17$$

$$6a. 0.7 + 0.88 = 1.58$$

$$7a. 4$$

$$8a. A = 9.99, B = 10.141, C = 10.92, D = 10.901. \text{ Order: } A, B, D, C.$$

#### Greater Depth

9a.

ones	tenths	hundredths	thousandths
●●●	●●●●	●●●●	
+	●●	●●	

$$5.87 + 3.3 = 9.17$$

$$10a. 0.945 + 0.83 = 1.775$$

$$11a. 14$$

$$12a. A = 13.121, B = 10.945, C = 11.981, D = 12.089. \text{ Order: } B, C, D, A.$$

## Varied Fluency

### Adding – Different Decimal Places

#### Developing

1b.

ones	tenths	hundredths	thousandths
●● ●●	●		
+	●●●	●	

$$3.2 + 4.01 = 7.21$$

$$2b. 0.53 + 0.3 = 0.83$$

$$3b. 12.2$$

$$4b. A = 5.51, B = 7.72, C = 8.69. \text{ Order: } A, B, C.$$

#### Expected

5b.

ones	tenths	hundredths	thousandths
●●● ●●●	●●	●	
+	●	●●●●	●

$$6.32 + 2.801 = 9.121$$

$$6b. 0.75 + 0.9 = 1.65$$

$$7b. 12.2$$

$$8b. A = 5.211, B = 5.162, C = 5.91, D = 6.05. \text{ Order: } B, A, C, D.$$

#### Greater Depth

9b.

ones	tenths	hundredths	thousandths
●●● ●●●	●●	●●	
+	●●●	●●	●

$$7.03 + 2.701 = 9.731$$

$$10b. 0.54 + 0.705 = 1.245$$

$$11b. 17$$

$$12b. A = 17.619, B = 16.542, C = 18.072, D = 17.394. \text{ Order: } B, D, A, C.$$