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.

D VF

Adding – Different Decimal Places

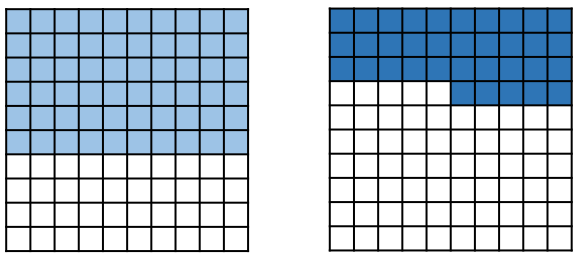
1b. Represent this addition on the place value chart 3.2 + 4.01

	ones	tenths	hundredths	thousandths
	●			
+	●			

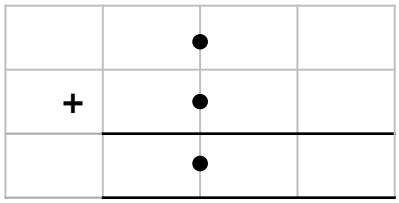
Now calculate their sum.

D VF

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

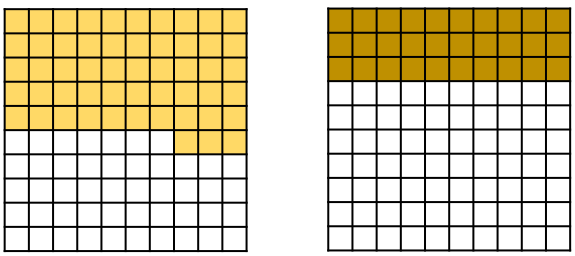


Convert to a column addition and complete the calculation.

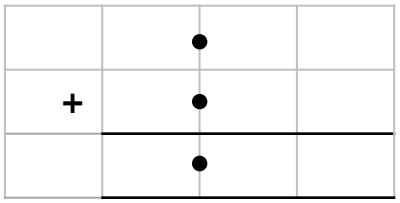


D VF

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



Convert to a column addition and complete the calculation.



D VF

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

2.01 + 1.93

3	4	2

D VF

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

2.22 + 9.99

12.2	11.2	11.9

D 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

D 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

D 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.

E VF

Adding – Different Decimal Places

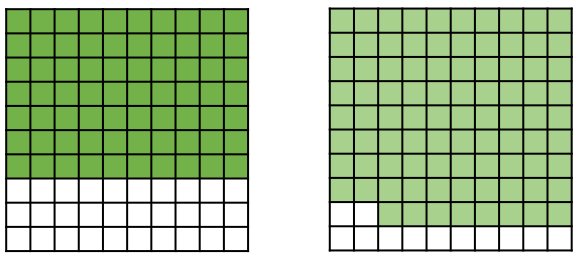
5b. Represent this addition on the place value chart 6.32 + 2.801

	ones	tenths	hundredths	thousandths
	●			
+	●			

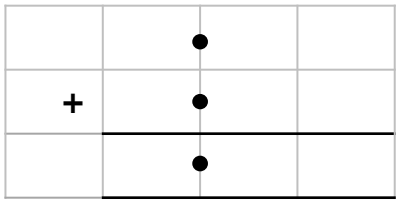
Now calculate their sum.

E VF

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

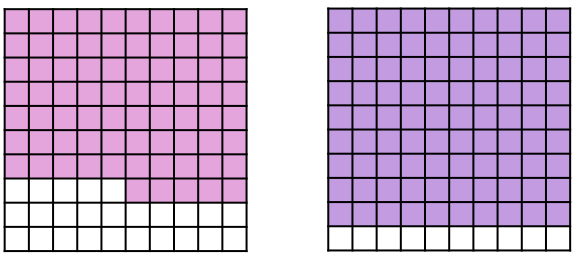


Convert to a column addition and complete the calculation.

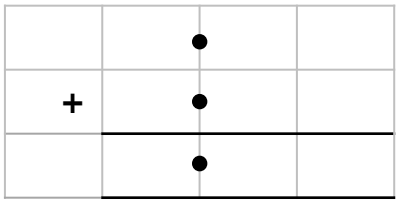


E VF

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



Convert to a column addition and complete the calculation.



E VF

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

2.01 + 1.93

4.2	4.12	4

E VF

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

2.22 + 9.99

12.2	12.4	12.5

E 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

E 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

E 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.

GD VF

Adding – Different Decimal Places

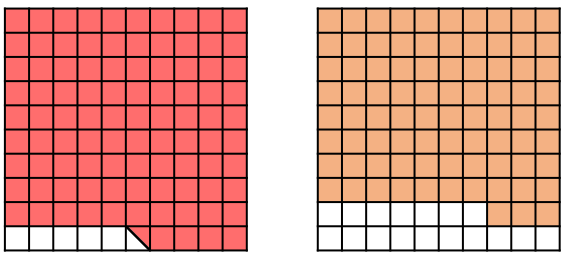
9b. Represent this addition on the place value chart 7.03 + 2.701

	ones	tenths	hundredths	thousandths
	•			
+	•			

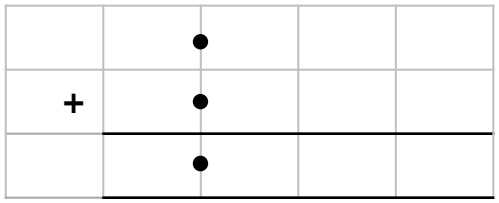
Now calculate their sum.

GD VF

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

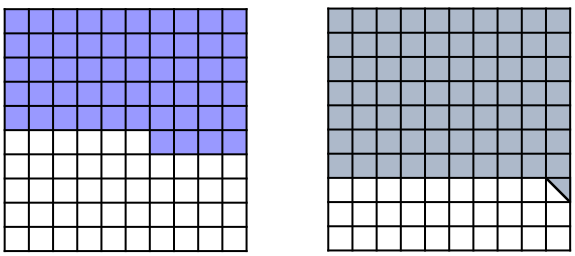


Convert to a column addition and complete the calculation.

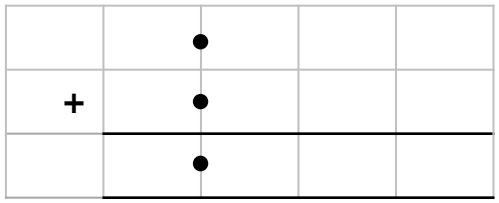


GD VF

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



Convert to a column addition and complete the calculation.



GD VF

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

6.901 + 7.07

13.9	12	14

GD VF

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

4.9 + 12.099

16	16.9	17

GD 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

GD 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

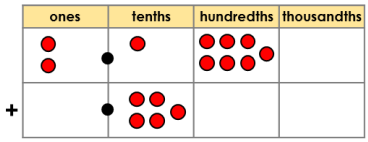
D. 15.32 + 2.074

GD VF

Varied Fluency
Adding – Different Decimal Places

Developing

1a.



2.17 + 0.5 = 2.67

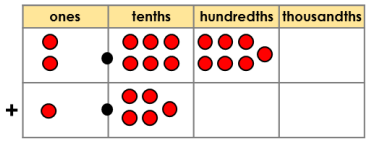
2a. 0.6 + 0.35 = 0.95

3a. 4

4a. A = 2.38, B = 2.22, C = 3.32. Order: B,A,C.

Expected

5a.



2.67 + 1.5 = 4.17

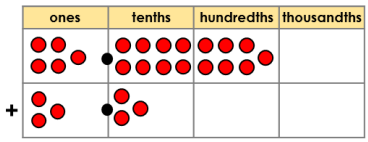
6a. 0.7 + 0.88 = 1.58

7a. 4

8a. A = 9.99, B = 10.141, C = 10.92, D = 10.901. Order: A,B,D,C.

Greater Depth

9a.



5.87 + 3.3 = 9.17

10a. 0.945 + 0.83 = 1.775

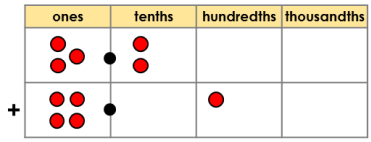
11a. 14

12a. A = 13.121, B = 10.945, C = 11.981, D = 12.089. Order: B, C, D, A.

Varied Fluency
Adding – Different Decimal Places

Developing

1b.



3.2 + 4.01 = 7.21

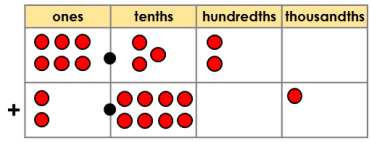
2b. 0.53 + 0.3 = 0.83

3b. 12.2

4b. A = 5.51, B = 7.72, C = 8.69. Order: A, B, C.

Expected

5b.



6.32 + 2.801 = 9.121

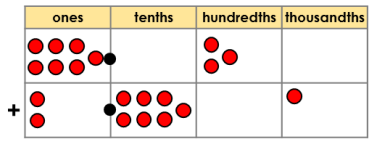
6b. 0.75 + 0.9 = 1.65

7b. 12.2

8b. A = 5.211, B = 5.162, C = 5.91, D = 6.05. Order: B,A,C,D.

Greater Depth

9b.



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. Order: B, D, A, C.