Homework
Efficient Strategies for Adding and Subtracting Decimals

National Curriculum Objectives:

Mathematics Year 5: (5F10) Solve problems involving number up to three decimal places
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:

Questions 1, 4 and 7 (Varied Fluency)
Developing Match bar and part whole models to missing parts. Calculations involve adding and subtracting decimals and whole numbers, including tens, ones and tenths; single exchanges.
Expected Match bar and part whole models to missing parts. Calculations involve adding and subtracting decimals and whole numbers, including hundreds, tens, ones, tenths and hundredths; up to two exchanges.
Greater Depth Match bar and part whole models to missing parts. Calculation involve adding and subtracting decimals and whole numbers, including hundreds, tens, ones, tenths and hundredths; multiple exchanges.

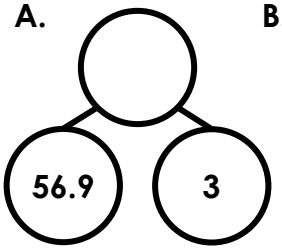
Questions 2, 5 and 8 (Varied Fluency)
Developing Fill in the blanks in six addition and subtraction calculations involving decimals and whole numbers, including tens, ones and tenths; single exchanges.
Expected Fill in the blanks in six addition and subtraction calculations involving decimals and whole numbers, including hundreds, tens, ones, tenths and hundredths; up to two exchanges.
Greater Depth Fill in the blanks in six addition and subtraction calculations involving decimals and whole numbers, including hundreds, tens, ones, tenths and hundredths; multiple exchanges.

Questions 3, 6 and 9 (Reasoning and Problem Solving)
Developing Complete the addition calculation using the remaining counters and a place value grid. Calculation involving decimals and whole numbers, including tens, ones and tenths; no exchanges.
Expected Complete the addition calculation using the remaining counters and a place value grid. Calculation involving decimals and whole numbers, including hundreds, tens, ones, tenths and hundredths; single exchanges.
Greater Depth Complete the addition calculation using the remaining counters and a place value grid. Calculation involving decimals and whole numbers, including hundreds, tens, ones, tenths and hundredths; two exchanges.

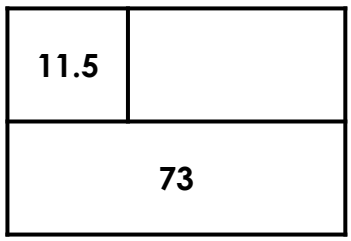
Efficient Strategies for Adding and Subtracting Decimals

1. Use the cards below to complete the models.

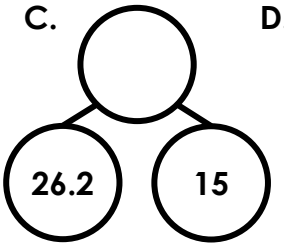
A.



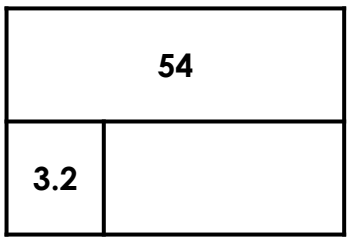
B.



C.



D.



50.8	59.9	61.5	41.2

D

VF
HW/Ext

2. Fill in the missing numbers below.

A. $\square + 28.1 = 59$

B. $83 - 1.5 = \square$

C. $17.9 + 74 = \square$

D. $38 - 3.9 = \square$

E. $5.3 + 15 = \square$

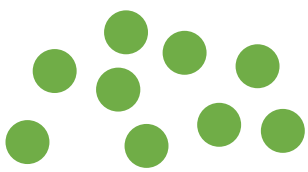
F. $\square - 5.6 = 89$

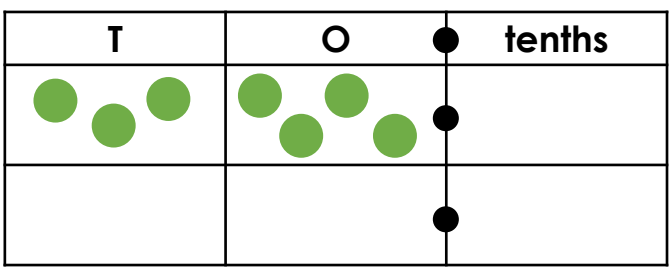
D

VF
HW/Ext

3. Olaf used this grid and a total of sixteen counters to add a whole number to a decimal number. He used no exchanges in the calculation. Use the remaining nine counters to complete the calculation.

$34 + \square = 49.3$





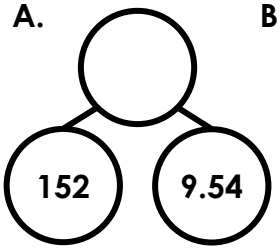
D

RPS
HW/Ext

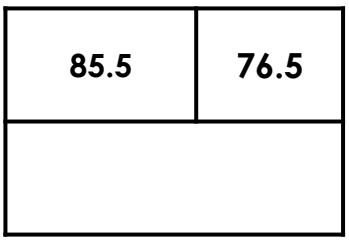
Efficient Strategies for Adding and Subtracting Decimals

4. Use the cards below to complete the models.

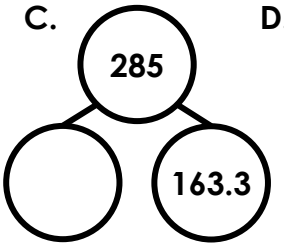
A.



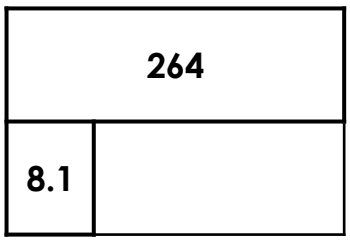
B.



C.



D.



121.7	255.9	161.54	162

VF
HW/Ext

5. Fill in the missing numbers below.

A. ☐ + 11.5 = 134

B. 58.17 + 175 = ☐

C. 147 − ☐ = 8.1

D. ☐ + 35.3 = 98

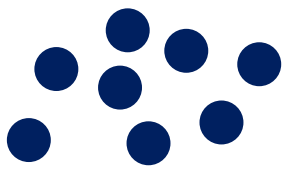
E. 185 − ☐ = 28.1

F. 32.98 + 198 = ☐

VF
HW/Ext

6. Elsa used this grid and a total of sixteen counters to add a whole number to a decimal number. She used one exchange in the calculation. Use the remaining eight counters to show a possible calculation.

35 + ☐ = ☐



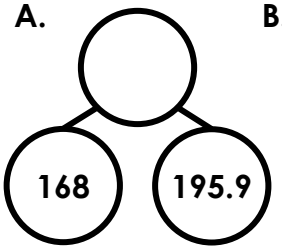
H	T	O	tenths	hundredths

RPS
HW/Ext

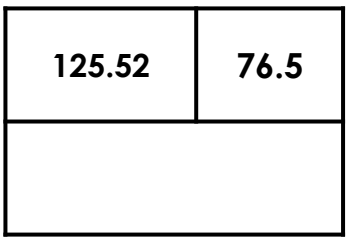
Efficient Strategies for Adding and Subtracting Decimals

7. Use the cards below to complete the models.

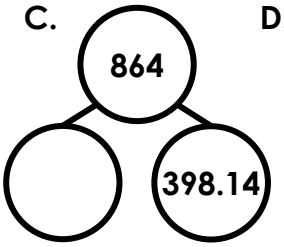
A.



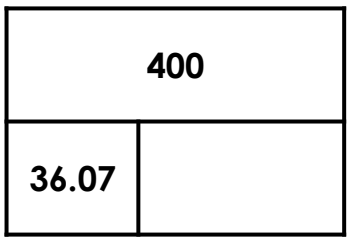
B.



C.



D.



363.93	363.9	202.02	465.86

GD

VF
HW/Ext

8. Fill in the missing numbers below.

A. ☐ + 74.46 = 101

B. 906 − 9.03 = ☐

C. 86.22 + ☐ = 548

D. ☐ + 75.96 = 811

E. 320 − ☐ = 75.85

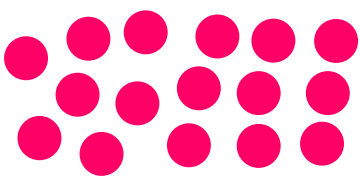
F. 96.96 + 109 = ☐

GD

VF
HW/Ext

9. Anna used this grid and a total of twenty-six counters to add a whole number to a decimal number. She used two exchanges in the calculation. Use the remaining sixteen counters to show a possible calculation.

154 + ☐ = ☐



H	T	O	tenths	hundredths
●	●●●	●●●		
			●	

GD

RPS
HW/Ext

Homework
Efficient Strategies for Adding and Subtracting Decimals

Developing

1. A = 59.9; B = 61.5; C = 41.2; D = 50.8
2. A. 30.9; B. 81.5; C. 91.9; D. 34.1; E. 20.3; F. 94.6
3. 34 + 15.3 = 49.3

Expected

4. A = 161.54; B = 162; C = 121.7; D = 255.9
5. A. 122.5; B. 233.17; C. 138.9; D. 62.7; E. 156.9; F. 230.98
6. Various possible answers, for example: 35 + 7.1 = 42.1

Greater Depth

7. A = 363.9; B = 202.02; C = 465.86; D = 363.93
8. A. 26.54; B. 896.97; C. 461.78; D. 735.04; E. 244.15; F. 205.96
9. Various possible answers, for example: 154 + 56.05 = 210.05