ADD AND SUBTRACT DECIMALS

BUILDING BLOCKS

NAME _____ CLASS _____ DATE _____

KEY IDEA

Line up the decimal points.

Add the tenths, then the ones.

(1) = one (0.1) = one tenth

10 tenths make 1 one.

	Ones	Tenths
1.4	(1)	(0.1) (0.1) (0.1) (0.1)
+ 2.3	(1) (1)	(0.1) (0.1) (0.1)

= 3.7

1 Use the counters to add. Write the answer.

a)

	Ones	Tenths
2.3	(1) (1)	(0.1) (0.1) (0.1)
+ 1.5	(1)	(0.1) (0.1) (0.1) (0.1) (0.1)

2.3 + 1.5 = ☐

b)

	Ones	Tenths
3.4	(1) (1) (1)	(0.1) (0.1) (0.1) (0.1)
+ 2.5	(1) (1)	(0.1) (0.1) (0.1) (0.1) (0.1)

3.4 + 2.5 = ☐

2 Each bar is 1 whole split into tenths. Complete each number fact.

a) 

0.4 + ☐ = 1

b) 

0.7 + ☐ = 1

c) 

0.9 + ☐ = 1

3 Complete the column additions. Keep the decimal points in line.

a)

T	O	t
	4 .	2
+	3 .	5
☐	☐	☐

b)

T	O	t
	2 .	6
+	1 .	8
☐	☐	☐

c)

T	O	t
1	3 .	4
+	5 .	3
☐	☐	☐

4 Complete the column subtractions.

In c), the numbers are amounts of money in pounds.

a)

O	t
6 .	8
− 2 .	5
☐	☐

b)

O	t
7 .	3
− 4 .	6
☐	☐

c)

O	t	h
5 .	7	5
− 2 .	4	0
☐	☐	☐

ADD AND SUBTRACT DECIMALS

SUPPORT

NAME _____ CLASS _____ DATE _____

KEY IDEA

Line up the decimal points, not the last digits.

Fill any empty place with a 0 placeholder:
12.4 is the same as 12.40

Exchange 10 hundredths for 1 tenth, and 10 tenths for 1 one.

	T	O	t	h
	1	2	. 4	0
+		3	. 7	5
	1	6	. 1	5
		1		

1 Work out each addition.

In c), write 15.6 + 4.83 in the grid yourself.

a)

	T	O	t	h
		3	. 4	7
+		2	. 3	1
	□	□	□	□

b)

	T	O	t	h
		6	. 5	8
+		2	. 7	6
	□	□	□	□

c)

	T	O	t	h
+				
	□	□	□	□

2 Work out each subtraction.

Write a 0 in any empty place before you start.

a)

	O	t	h
	8	. 6	5
−	3	. 4	2
	□	□	□

b)

	O	t	h
	7	. 2	
−	4	. 8	5
	□	□	□

c)

	O	t
	9	.
−	3	. 6
	□	□

3 Jo has worked out 4.6 + 2.35. Her answer is 2.81.

Jo's working

4.6
+ 2.35
2.81

a) What mistake has Jo made?

.....

b) Work out 4.6 + 2.35 correctly. ☐

4 A pen costs £1.85 and a notebook costs £2.40.

a) How much do the pen and the notebook cost altogether? ☐

b) How much change do you get from £5? ☐

ADD AND SUBTRACT DECIMALS

CORE

NAME _____ CLASS _____ DATE _____

KEY IDEA

Line up the decimal points and use 0 as a placeholder so every number has the same number of decimal places, e.g. 20 – 6.373 becomes 20.000 – 6.373. Counting on can be quicker for subtracting from a whole number. Check with the inverse.

FLUENCY

1 Work out each calculation.

a) 23.68 + 9.75 ☐

b) 4.096 + 12.37 ☐

c) 31.4 – 17.86 ☐

d) 20 – 6.373 ☐

2 Find each missing number.

a) 3.7 + ☐ = 10

b) ☐ – 2.65 = 4.8

c) 12.5 – ☐ = 8.76

d) 0.85 + ☐ = 3

REASONING

3 Fill in the missing digits.

a)

$$\begin{array}{r} 4.\square 6 \\ +\ \square.58 \\ \hline 7.0\square \end{array}$$

b)

$$\begin{array}{r} 9.\square 3 \\ -\ \square.67 \\ \hline 3.46 \end{array}$$

4 Mo says, "8 – 3.97 gives the same answer as 8 – 4 + 0.03." Is he right? Explain why, and find the answer.

ADD AND SUBTRACT DECIMALS

GREATER DEPTH

NAME _____ CLASS _____ DATE _____

REASONING

1 Is each statement always, sometimes or never true? Circle your answer.

Give an example to support each answer.

a) Two 2 d.p. numbers add to a 2 d.p. number. ALWAYS SOMETIMES NEVER

b) a – b gives the same answer as b – a. ALWAYS SOMETIMES NEVER

c) Subtracting 0.1 changes the tenths digit. ALWAYS SOMETIMES NEVER

PROBLEM SOLVING

2 Use each digit card once in each calculation.

3	5	6	8

a) □.□ + □.□ = □ (total as close to 10 as possible)

b) □.□ – □.□ = □ (smallest possible difference)

3 Sam has £20. He buys a T-shirt for £8.49, a cap for £5.75 and socks for £4.99.

a) How much change does he get from £20? □

b) He swaps the cap for a hat that costs £1.35 more.
Can he still pay for all three items with £20? Show how you know.

★ CHALLENGE FOR ALL

4 Every row, column and diagonal of this magic square has the same total. Complete it.

0.6	1.85	
	1.35	
	0.85	

Total = □

ADD AND SUBTRACT DECIMALS

ANSWERS

BUILDING BLOCKS

1 a) 3.8 · b) 5.9
2 a) 0.6 · b) 0.3 · c) 0.1
3 a) 7.7 · b) 4.4 · c) 18.7
4 a) 4.3 · b) 2.7 · c) £3.35

SUPPORT

1 a) 5.78 · b) 9.34 · c) 20.43
2 a) 5.23 · b) 2.35 (7.20 – 4.85) · c) 5.4 (9.0 – 3.6)
3 a) She lined up the last digits instead of the decimal points (the 6 tenths is under the 5 hundredths).
b) 6.95
4 a) £4.25 · b) £0.75 (75p)

CORE

1 a) 33.43 · b) 16.466 · c) 13.54 · d) 13.627
2 a) 6.3 · b) 7.45 · c) 3.74 · d) 2.15
3 a) 4.46 + 2.58 = 7.04 (missing 4, 2, 4) · b) 9.13 – 5.67 = 3.46 (missing 1, 5)
4 Yes. 3.97 is 0.03 less than 4, so taking away 4 takes away 0.03 too much; add it back. 8 – 3.97 = 4.03

GREATER DEPTH

1 a) Sometimes (1.23 + 2.34 = 3.57, but 1.25 + 1.25 = 2.5) · b) Sometimes (only when a = b) · c) Always (e.g. 4.0 – 0.1 = 3.9)
2 a) 10.3 (e.g. 3.5 + 6.8) · b) 0.5 (6.3 – 5.8)
3 a) £0.77 · b) No: the new total is £20.58, which is £0.58 too much
4 Total 4.05. Rows: 0.6, 1.85, 1.6 / 2.35, 1.35, 0.35 / 1.1, 0.85, 2.1