Adding decimals with the same number of decimal places

1 Complete the additions.

Use the place value charts to help you.

a) 4.45 + 3.21 = [ ]

Ones	Tenths	Hundredths
1 1 1	0.1 0.1 0.1	0.01 0.01 0.01
1	0.1	0.01 0.01
1 1 1	0.1 0.1	0.01

```
    4 • 4 5
+   3 • 2 1
  ─────────
      •
```

b) 4.45 + 3.61 = [ ]

Ones	Tenths	Hundredths

```
    4 • 4 5
+   3 • 6 1
  ─────────
      •
```

c) 4.45 + 3.78 = [ ]

Ones	Tenths	Hundredths

```
    4 • 4 5
+   3 • 7 8
  ─────────
      •
```

Which calculation was easier? Talk about it with a partner.

2 Use the column method to work out the additions.

a)
```
      5 • 3
  +   2 • 5
    ─────────
        •
```

b)
```
      6 • 0 3
  +   3 • 9 1
    ───────────
        •
```

c)
```
      2 • 3 2
  + 1 0 • 1 7
    ───────────
        •
```

d)
```
      6 • 3 7
  +   6 • 2 6
    ───────────
        •
```

e)
```
      3 • 1 0 2
  +   5 • 8 7 6
    ─────────────
        •
```

f)
```
  1 2 • 0 3 4
  +   9 • 2 2 7
    ─────────────
        •
```

g)
```
      5 • 7 5
      5 • 3 2
  +   5 • 0 1
    ───────────
        •
```

h)
```
    1 4 • 9 9
  + 1 2 • 3 7
    ───────────
        •
```

3 Work out the calculations.

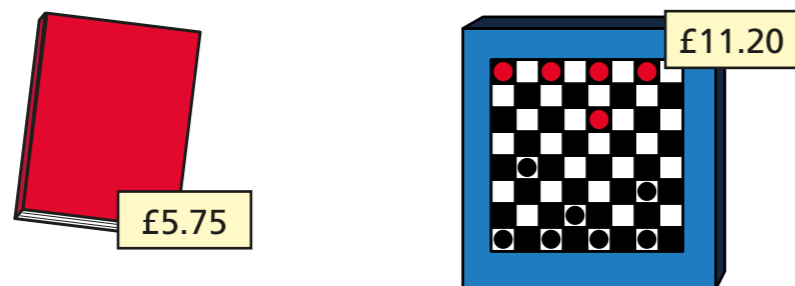Write <, > or = to make the statements correct.

a) 0.64 + 4.79 ◯ 5.01 + 0.23

b) 7.427 + 3.238 ◯ 5.427 + 5.832

c) 3.08 + 4.63 ◯ 4.84 + 2.87

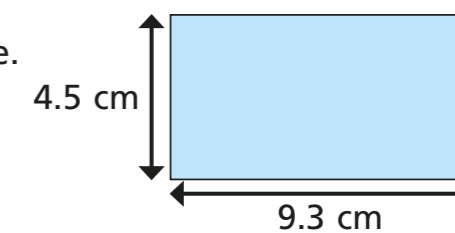**4** Teddy is working out the total cost of these items.

£11.20

£5.75

Here are his workings.

```
      5 · 7   5
+   1 1 · 2   0
─────────────────
    6 8 · 7   0
─────────────────
```

Talk to a partner about Teddy's mistake.

Work out the correct answer.

5 Work out the perimeter of the shape.

4.5 cm

9.3 cm

perimeter = ⬚ cm

6 Complete the number line.
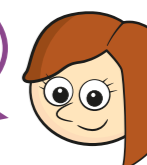
+ 1.78   + 1.78   + 1.78

3.65
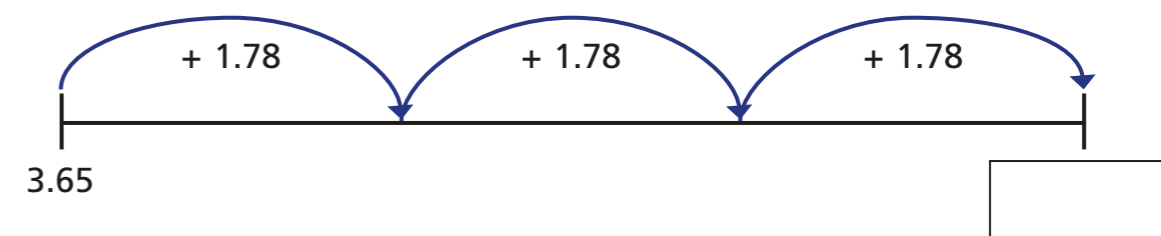
7 Eva starts with the number 1.62
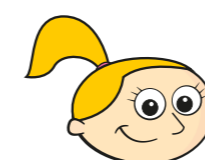
I added a number and got 2.8

Eva

Rosie

This is impossible as 2.8 only has one digit after the decimal.

Is Rosie correct? _____

Talk about it with a partner.

Subtracting decimals with the same number of decimal places

1 Use a place value chart and counters to help you complete the subtractions.

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

a) 14.83 − 12.12 = ⬚

c) 14.83 − 12.92 = ⬚

b) 14.83 − 12.14 = ⬚

d) 14.83 − 12.94 = ⬚

e) Which calculation was easier? Talk about it with a partner.

f) What happens when you don't have enough counters in a column to take away?

_____

_____

2 Complete the sentences.

1 ten can be exchanged for ⬚ ones.

1 one can be exchanged for ⬚ tenths.

1 tenth can be exchanged for 10 _____.

3 Annie is calculating 2.42 − 1.17 using the column method.

She uses a place value chart to help her.

Ones	•	Tenths	Hundredths
1 1		0.1 0.1 0.1 0̸	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01

$$\begin{array}{r} 2 \cdot {}^3\!\!\not{4}\ {}^1 2 \\ -\ 1 \cdot 1\ \ 7 \\ \hline 1 \cdot 2\ \ 5 \end{array}$$

How does the place value chart support the column method?

Talk about it with a partner.

4 Complete the column subtractions.

a)

$$\begin{array}{r} 5 \cdot 6\ \ 4 \\ -\ 3 \cdot 1\ \ 2 \\ \hline \cdot \end{array}$$

c)

$$\begin{array}{r} 8 \cdot 0\ \ 9 \\ -\ 3 \cdot 8\ \ 1 \\ \hline \cdot \end{array}$$

b)

$$\begin{array}{r} 5 \cdot 6\ \ 4 \\ -\ 3 \cdot 1\ \ 5 \\ \hline \cdot \end{array}$$

d)

$$\begin{array}{r} 1\ 2 \cdot 0\ \ 2 \\ -\ 1\ 1 \cdot 3\ \ 8 \\ \hline \cdot \end{array}$$

5 Whitney has £8.52

She buys this comic.

How much money does she have left?

RoboBoy

£3.25

£ ☐
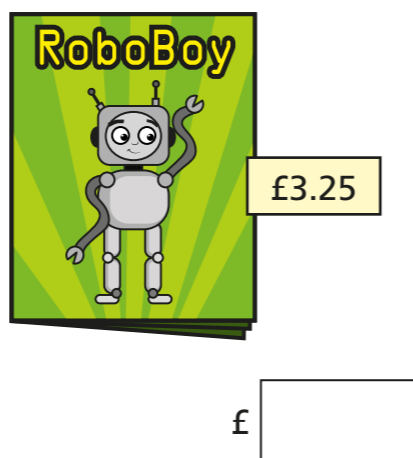
6 Here are some items for sale in a shop.

£2.27   £9.10   £4.91   £1.09

a) How much more does a scarf cost than a bag of marbles?

£ ☐

b) Esther has £15.31

She buys a pair of headphones and a bag of marbles.

How much money does she have left?

£ ☐

c) Tom has £7.01

He buys one item and has £5.92 left.

What did he buy?

Tom bought _____.

7 Ron and Dora are doing a sponsored walk.

Ron walks 3.12 miles.

Dora walks 5.49 miles.

How much further does Dora walk than Ron?

Dora walks ☐ miles further than Ron.

8 Tommy has three pieces of string.

- The first piece is 0.78 m long.
- The second piece is 0.24 m shorter than the first piece.
- The third piece is 0.07 m shorter than the second piece.

What is the total length of all three pieces of string?

Give your answer in metres and centimetres.

☐ m and ☐ cm

9 A, B and C are points on a number line.

A	B	C
118.76	159.72	186.34

100   200

How much greater is the difference between A and C than the difference between B and C?

☐

Compare methods with a partner.

Adding decimals with a different number of decimal places

1 Ron is adding 1.4 and 2.53

He makes each number with counters.

Ones	Tenths	Hundredths
●	● ● ● ●	
● ●	● ● ● ● ●	● ● ●

a) What is the answer to Ron's calculation?

b) Explain your method to a partner.

c) Did you have to make an exchange? _____.

2 Work out the additions.

a)

```
    3 • 0   2
+   1 • 6
  _____
      •
```

c)

```
      2 • 8
+   3 • 4   5
  _____
      •
```

b)

```
    1   3 • 5
+       0 • 2   3
  _____
        •
```

d)

```
      6 • 1   5
+   1   3 • 9
  _____
        •
```

3 Filip is adding two numbers together.

He writes it as a column addition.

```
      1   3 • 8
+     1 • 9   5
  _____
      3 • 3   3
      1       1
```

a) What mistake has Filip made?

_____

_____

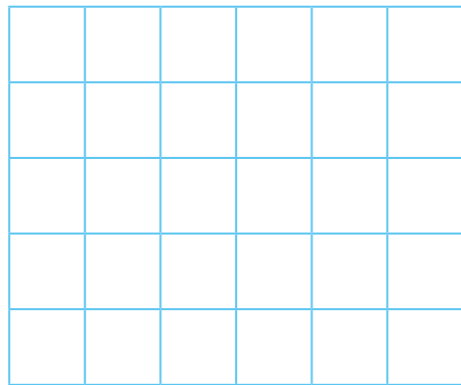**b)** Use the column method to work out the correct answer.

4 Use the column method to work out the additions.

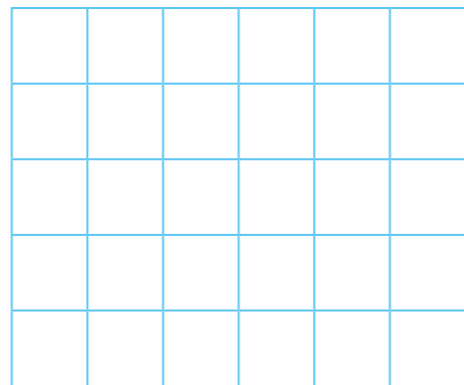**a)** 2.36 + 1.9   **b)** 14.82 + 3.7
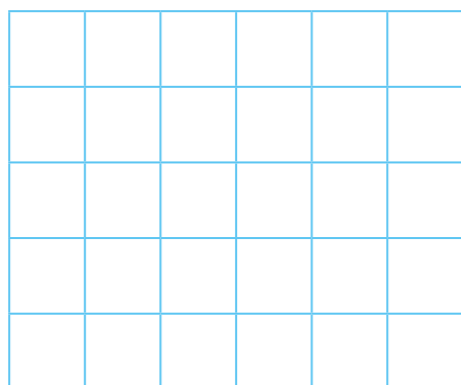
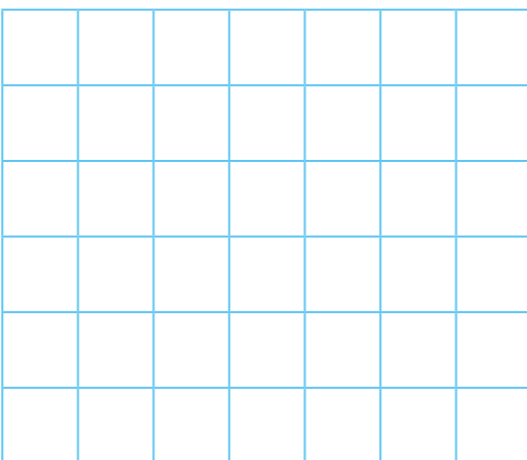**5** Use the column method to work out the additions.

a) 0.59 + 11.9

c) 0.591 + 1.73

b) 77.34 + 1.82

d) 3.2 + 1.84 + 0.931

6 Mr Hall drives from point A to point B, then on to point C.

72.5 km   103.6 km
A   B   C
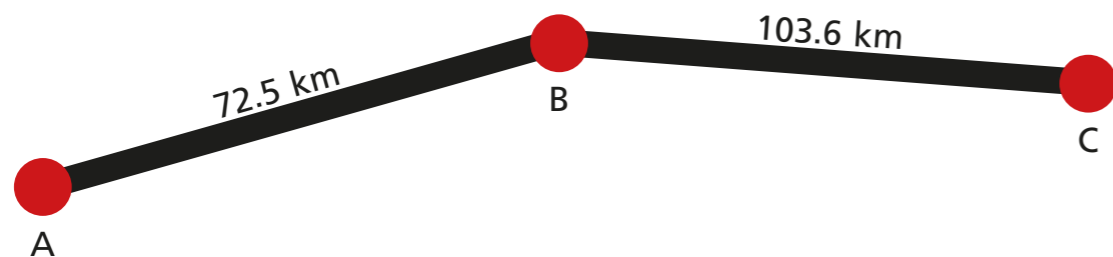
What is the total distance that Mr Hall drives?

[   ] km

7 Here are four number cards.

[3.8]   [4.19]   [0.72]   [11.46]

a) What is the greatest total you can make by adding two of the numbers?

Complete the calculation.

[   ] + [   ] = [   ]

b) What is the sum of the four numbers?
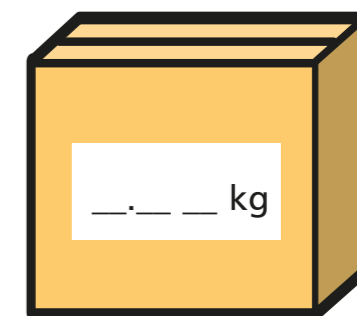
[   ]

8 Work out the missing digits.

a) __4.3 + 1__.37 = 39.67   **b)** 4.8__ + __.__ = 12.65

9 The total mass of the two boxes is 10.85 kg.

What could the mass of each box be?

__.__ kg   __.__ __ kg

How many answers can you find?

Subtracting decimals with a different number of decimal places

1 Use the place value chart to help you work out the subtractions.

Ones	Tenths	Hundredths
⚫⚫⚫ ⚫⚫	⚫⚫⚫	⚫⚫⚫ ⚫⚫⚫

a)

$$\begin{array}{r} 5 . 3 \; 6 \\ -\; 1 . 2 \\ \hline . \\ \hline \end{array}$$

c)

$$\begin{array}{r} 5 . 3 \; 6 \\ -\; 3 . 8 \\ \hline . \\ \hline \end{array}$$

b)

$$\begin{array}{r} 5 . 3 \; 6 \\ -\; 3 . 5 \\ \hline . \\ \hline \end{array}$$

d)

$$\begin{array}{r} 5 . 3 \; 6 \\ -\; 4 . 7 \\ \hline . \\ \hline \end{array}$$

2 Alex is using counters to help her work out 4.7 − 1.35
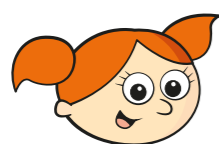
> I can't do this as I don't have any hundredths counters.

Do you agree with Alex? _____.

Talk about it with a partner.

3 Complete the subtractions.

a)

$$\begin{array}{r} 2 . 3 \; 6 \\ -\; 1 . 4 \\ \hline . \\ \hline \end{array}$$

c)

$$\begin{array}{r} 7 . 3 \\ -\; 1 . 1 \; 5 \\ \hline . \\ \hline \end{array}$$

b)

$$\begin{array}{r} 6 . 1 \; 5 \\ -\; 3 . 8 \\ \hline . \\ \hline \end{array}$$

d)

$$\begin{array}{r} 2 \; 4 . 4 \\ - 3 . 1 \; 2 \\ \hline . \\ \hline \end{array}$$

4 Use the column method to work out the subtractions.
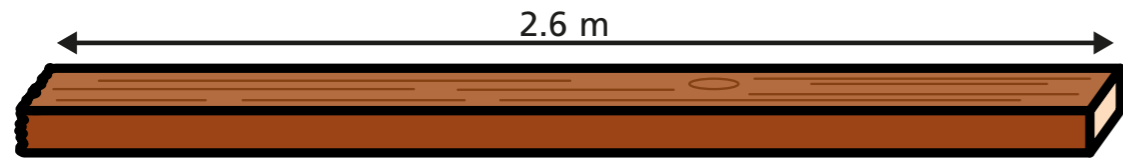
a) 13.59 − 1.82

c) 5.6 − 1.39

b) 73.84 − 9.2

d) 18.2 − 3.64

5 A plank of wood measures 2.6 m.

A carpenter cuts a piece of wood from the plank that is 0.52 m long.
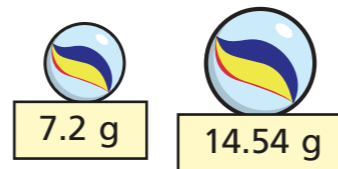
2.6 m

a) What is the length of the remaining plank?

☐ m

b) The carpenter cuts a second piece of wood from the plank.

She now has 0.3 m of the plank remaining.

What is the length of the second piece of wood that she cut?

☐ m

6 The mass of a bag of marbles is 54.3 g.

These two marbles are removed from the bag.

7.2 g   14.54 g

What is the mass of the bag of marbles now?

☐ g

7 Work out the missing digits.

__3.4 – 2.5__ = 10.81

8 Use the column method to work out the subtractions.

a) 14 – 2.7

d) 26 – 3.91

b) 8 – 3.65

e) 25 – 3.842

c) 20 – 2.85

f) 90 – 0.821