Decimals (2)

- Multiplying and dividing decimals by 10, 100 and 1000
- Adding and subtracting decimals

Keywords

You should know

explanation 1a   explanation 1b

1 Work out these calculations.

a 2.7×10 b 0.21×10 c 0.05×10 d 0.28×10

e 5.6×10 f 0.07×10 g 0.86×10 h 0.94×10

2 Work these out.

a $36 \div 10$ b $8.7 \div 10$ c $17.3 \div 10$ d $0.7 \div 10$

e $0.48 \div 10$ f $24.2 \div 10$ g $6.4 \div 10$ h $87.1 \div 10$

3 Work these out.

a 1.23×100 b 3.4×1000 c 100×0.57 d 0.28×100

e 8.24×100 f 100×4.76 g 0.36×100 h 14.1×100

4 Work these out.

a $328 \div 100$ b $52 \div 100$ c $67 \div 100$ d $2390 \div 100$

e $91 \div 100$ f $1574 \div 100$ g $8310 \div 100$ h $748 \div 100$

5 Max's Pizza charges £3.49 per pizza.
How much would 10 pizzas cost?

6 David and Gemma are stuck on the question 5.3×10.
David says the answer is 5.30 because you put a zero on the end when you multiply by 10.
Gemma says she thinks the answer is 53.

Explain why Gemma is correct.

7 Work these out.

    a $72 \div 10$ **b** 3.74×100 **c** 0.43×10 **d** $12.3 \div 100$

    e 0.07×100 **f** $6.1 \div 10$ **g** $5432 \div 100$ **h** 4.68×100

8 Find the value of the missing number.

    a $\square \times 0.003 = 0.3$ **b** $2.7 \div \square = 0.027$ **c** $100 \times \square = 45$

    d $\square \div 100 = 0.653$ **e** $10 \times \square = 0.09$ **f** $\square \div 1000 = 8.6$

> explanation 2

9 Jafar buys two DVDs at a shop. One cost £11.39 and the other cost £9.99.

How much did he spend?

```
  1 1 . 3 9
+    9 . 9 9
_____
```

10 Sharon buys two books from the supermarket. One cost £3.73 and the other cost £4.51.

How much did she spend?

11 Keith buys a t-shirt for £6.99 and a pair of jeans for £26.99.

How much did he spend?

12 Work out the total cost of a shirt at £18.75 and a tie at £12.99.

```
  1 8 . 7 5
+ 1 2 . 9 9
_____
```

13 Esme wanted to find out the total cost of her last three calls on her mobile phone.
The calls cost £3.27, 36p and £4.

Explain Esme's mistake.
Work out the correct total cost of the calls.

```
    3 . 2 7
        3 6
+          4
_____
    3 . 6 7
```

14 Find the total cost of a sandwich at £2.30, a packet of crisps at 45p and a drink at £1.

15 Work out these sums.

    a 16.3 + 7.25   **b** 0.146 + 2.59   **c** 5.23 + 11.9 + 6

    d 2.31 + 17.5 + 1.47   **e** 32 + 4.76 + 12.38   **f** 0.076 + 0.14 + 2.83

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explanation 3

16 Ashok has a £5 note. He buys a snack for £1.39.

How much change should he get?

$$\begin{array}{r} 5\,.\,0\,0 \\ -\ 1\,.\,3\,9 \\ \hline \end{array}$$

17 Mia bought two CDs for £12.97. One of the CDs cost £4.79.

How much did the other one cost?

18 Chloe's car service cost £134.25 + VAT. She paid a total price of £157.74.

How much was the VAT?

19 Naveed bought a book at £3.79 and a CD at £9.79 at the supermarket.
He pays with a £20 note.
How much change should he get?

20 Jenny spent £34.37 at the supermarket.
She paid with two £20 notes.
How much change should she have?

$$\begin{array}{r} 40\,.\,0\,0 \\ -\ 34\,.\,3\,7 \\ \hline \end{array}$$

21 Work out these differences.

    a 39.4 − 8.7   **b** 9.45 − 1.637   **c** 76.8 − 9.651

    d 456 − 67.83   **e** 1.78 − 0.3486   **f** 234.68 − 97

22 You will need to do two calculations for each of these.

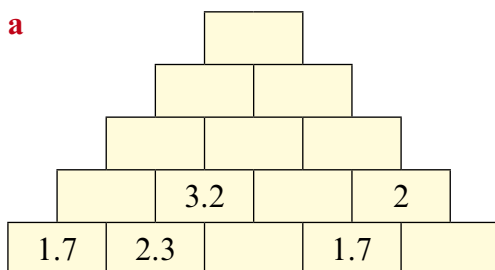   **a** 5.37 + 6.28 − 7.9   **b** 12.3 − 6.74 + 8.6   **c** 82.6 − 19.8 − 7.53

    d 500 − 123.78 − 237.6   **e** 0.79 + 0.0286 − 0.0179   **f** 27 − 3.14 + 0.486

23 Copy and complete these addition pyramids.

a

1.7	2.3		1.7	

with 3.2, 2 in the row above.

b

| | 1.8 | | 2.0 | 0.6 |

with 50 at top, 7.4 in a lower row.
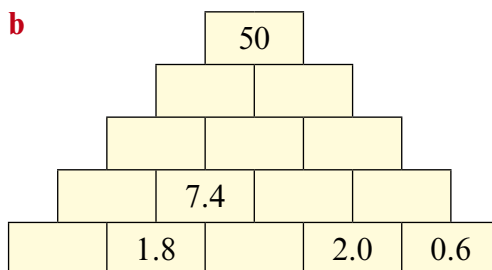
24 Copy and complete these calculations.

a
$$
\begin{array}{r}
2\,.\,\square\,8 \\
+\ 1\,\square\,.\,3\,7 \\
\hline
\square\,2\,.\,8\,\square \\
\end{array}
$$

b
$$
\begin{array}{r}
1\,7\,.\,\square\,9 \\
+\ 2\,\square\,.\,3\,\square \\
\hline
\square\,2\,.\,0\,4 \\
\end{array}
$$

c
$$
\begin{array}{r}
3\,\square\,.\,8\,\square \\
-\ 1\,4\,.\,\square\,2 \\
\hline
\square\,8\,.\,5\,4 \\
\end{array}
$$

d
$$
\begin{array}{r}
9\,.\,7\,\square\,3 \\
-\ 4\,.\,\square\,7\,\square \\
\hline
\square\,.\,3\,9\,2 \\
\end{array}
$$

25 This diagram shows a magic star.
The numbers lying on each line have the same total.

Copy and complete the magic star using these numbers.
2.5   0.75   2.75   1   0.5