## Multiplying decimals by a 2-digit number using the expanded written method

- Multiply a decimal by a 2-digit number using the expanded written method of long multiplication
- Estimate and check the answer to a calculation



## What number is each clue describing?

- a It is six times larger than 0.09.
- b It is 0.6 more than triple 0.05.
- e It is double f It is 10 less than when you multiply double again. 50 by 0.5.
- i It is half of 0.32 and half again.
- It is the sum of 7 multiplied by 0.07 and 0.25 multiplied by 4.
- c It is 100 times larger than 0.07 multiplied by 6.
  - g It is 8 times more than 8.9.
- h It is 10 times smaller than 0.5
- k It is the same as 2.22 multiplied by 4 add 3 multiplied by 3.33.
- It is 5 times larger than 2.3 multiplied by 2.

d It is one

quarter

of 100.



Find the answer to these calculations using the expanded written method of long multiplication. Estimate the answer first. Convert the decimals to whole numbers, carry out the calculation, then convert the answer back to a decimal.

<b>a</b> 2	·38 × 25	b	4.55 ×	46	C	6.84	×	31
<b>d</b> 5	·78 × 56	е	6·74 ×	28	f	8.76	×	15
g 3	·45 × 19	h	2·78 ×	35	i	6.38	×	42
j 6	$74 \times 27$	k	7·35 ×	18	١.	3.98	×	51
m 8	·06 × 37	n	5·40 ×	75	0	9.38	×	19

## Example

 $5.37 \times 33 \rightarrow 5 \times 30 = 150$ 

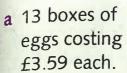
		5	3	7	
	×		3	3	
	1	6	1	1	(537 × 3)
1	6	1	1	0	(537 × 30)
1	7	7	2	1	

 $5.37 \times 33$  is equivalent to  $537 \times 33 \div 100$ .

This equals 17 721 ÷ 100, which is 177.21.

 $5.37 \times 33 = 177.21$ 

1 Work out the total cost of each purchase. Write your answer in pounds (£).





b 29 bottles c 46
of juice hamburgers costing £5.38
£2.89 each.



d 38 pizzas costing £6.29 each.

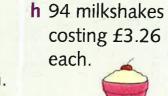
67 pencils



f 25 bottles of olive oil costing £4.85 each.



g 17 loaves





j 78 chocolate bars costing £1.95 each.

e 54 cupcakes

costing



- Work out the total cost of each purchase. Think carefully about how you are going to work out the answer: using a mental or a written method. Write your answer in pounds (£).
- a 18 books costing £8.55 each.



56 cans of

soup costing

£1.76 each.

costing £5.90 each.

b 62 pies



cakes costing

£9.39 each.

g 38 large

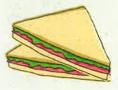
c 43 bags of popcorn costing £3.70 each.



d 39 hotdogs costing £4.80 each.



e 76 sandwiches costing £4.10 each.



h 27 bags j 69 c costing cost £7.39 each.



j 69 candles costing £3.67 each.



i 48 pens costing £2.89 each.

