Place value, ordering and rounding

- Reading whole numbers with more than 3 digits
- Adding and subtracting whole numbers
- Multiplying and dividing by 10, 100 and 1000
- Rounding numbers to the nearest 10, 100 or 1000

Keywords

You should know

explanation 1

1 Write the value of each underlined digit.

a 123<u>8</u>	**b** <u>9</u>145	**c** <u>1</u>3 695	**d** 15 2<u>4</u>7
e 32 <u>1</u>26	**f** <u>3</u>5 625	**g** 42 <u>7</u>65	**h** 64 3<u>8</u>6

2 Write the numbers from question **1** in words. The first one has been done for you.

a 1238 is one thousand, two hundred and thirty-eight.

3 Write these numbers from question **1** in order of size. Start with the smallest.

a 13 695, 32 126, 9145, 64 386

b 42 765, 1238, 15 247, 35 625

4 Write these numbers in digits.

a Four thousand, three hundred and five

b Four hundred and seventy-six

c Thirty-two thousand and twenty

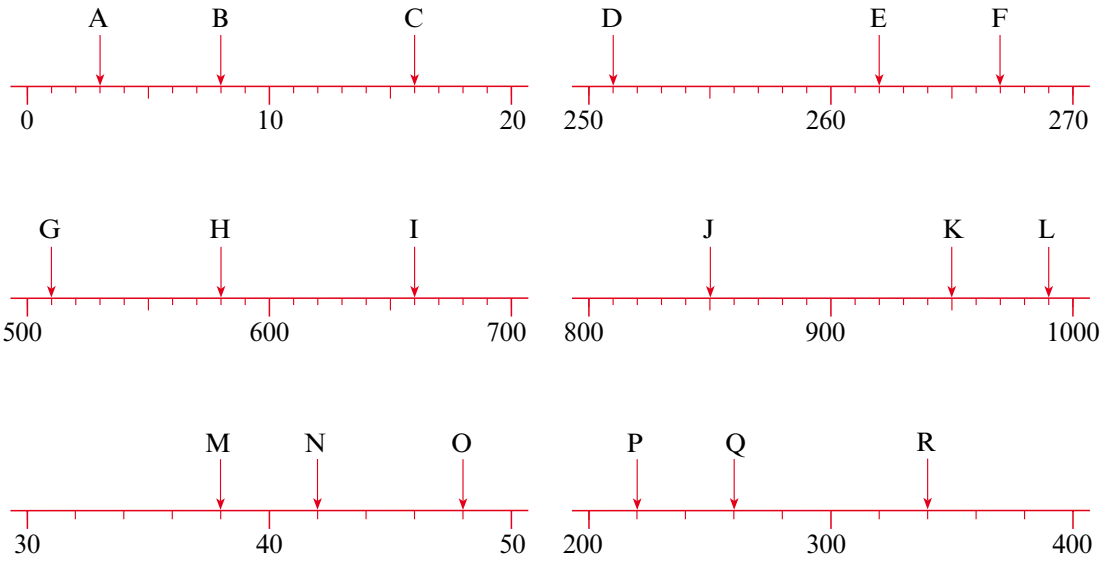
d Eight thousand, three hundred and eleven

e Five hundred thousand and six

f Sixteen thousand, two hundred and three

explanation 2 online

5 Write the number shown by each arrow.



explanation 3

6 Work out these additions.

a 3526 + 243

b 2154 + 835

c 3724 + 615

d 2714 + 185

e 1356 + 629

f 7256 + 518

g 2567 + 831

h 3560 + 723

i 3567 + 474

j 1479 + 230

k 7548 + 6650

l 8263 + 5488

7 Work out these subtractions.

a
$$\begin{array}{r} 2397 \\ -\ 243 \\ \hline \\ \hline \end{array}$$

b
$$\begin{array}{r} 3496 \\ -\ 270 \\ \hline \\ \hline \end{array}$$

c
$$\begin{array}{r} 4860 \\ -\ 321 \\ \hline \\ \hline \end{array}$$

d
$$\begin{array}{r} 5830 \\ -\ 321 \\ \hline \\ \hline \end{array}$$

e
$$\begin{array}{r} 3500 \\ -\ 295 \\ \hline \\ \hline \end{array}$$

f
$$\begin{array}{r} 7700 \\ -\ 123 \\ \hline \\ \hline \end{array}$$

g
$$\begin{array}{r} 3000 \\ -\ 474 \\ \hline \\ \hline \end{array}$$

h
$$\begin{array}{r} 9000 \\ -\ 268 \\ \hline \\ \hline \end{array}$$

i
$$\begin{array}{r} 5363 \\ -\ 215 \\ \hline \\ \hline \end{array}$$

j
$$\begin{array}{r} 3724 \\ -\ 618 \\ \hline \\ \hline \end{array}$$

k
$$\begin{array}{r} 4656 \\ -\ 279 \\ \hline \\ \hline \end{array}$$

l
$$\begin{array}{r} 2351 \\ -\ 768 \\ \hline \\ \hline \end{array}$$

8 Work out these additions and subtractions.
Which calculation is the odd one out?

a	**i**	235 + 627	**ii**	328 + 534	**iii**	454 + 418
b	**i**	523 − 216	**ii**	945 − 648	**iii**	665 − 358
c	**i**	134 + 328	**ii**	851 − 379	**iii**	730 − 268
d	**i**	1043 − 584	**ii**	1422 − 963	**iii**	1288 − 819

9 Each column, row and diagonal in a magic square add up to the same number.

Copy and complete these magic squares.

a Magic number = 18

7		
	6	
3		5

b Magic number = 21

6	7	
		4

c Magic number = ☐

8		
	5	
	7	2

d Magic number = ☐

7	8	9
		4

10 Find the missing digits in these additions and subtractions.

a
$$\begin{array}{r} 26\square 8 \\ +\ \square 4\square \\ \hline 2969 \end{array}$$

b
$$\begin{array}{r} \square 787 \\ +\ \square 5\square \\ \hline 5443 \end{array}$$

c
$$\begin{array}{r} 4\square 8\square \\ -\ 2\square 5 \\ \hline 4324 \end{array}$$

d
$$\begin{array}{r} \square 250 \\ -\ \square 2\square \\ \hline 2826 \end{array}$$

explanation 4a | explanation 4b | online

11 Work these out.

a 271 × 10 **b** 3600 ÷ 10 **c** 209 × 10 **d** 452 × 10

e 370 ÷ 10 **f** 28 × 100 **g** 37 500 ÷ 100 **h** 6730 ÷ 10

12 Work these out.

a 12 × 100 **b** 340 × 100 **c** 620 ÷ 10 **d** 570 × 100

e 990 ÷ 10 **f** 74 500 × 100 **g** 340 × 100 **h** 810 × 100

13 A car on a motorway travels 28 m every second. Work out how far it travels in these times.

a 10 seconds **b** 1 minute 40 seconds

1 minute = 60 seconds

14 James is learning to play the piano. He practises for 10 hours a week.

a How long does he practise in four weeks?

b How long does he practise in a year?

There are 52 weeks in a year.

explanation 5 | online

15 Work these out.

a 18 × 100 **b** 8000 ÷ 100 **c** 21 000 ÷ 100 **d** 25 × 1000

e 7600 ÷ 10 **f** 34 000 ÷ 1000 **g** 6700 ÷ 100 **h** 100 × 620

i 32 800 ÷ 100 **j** 27 000 ÷ 100 **k** 286 × 100 **l** 23 900 ÷ 100

16 What is each missing number?

a □ × 10 = 3200 **b** 27 000 ÷ □ = 27 **c** 100 × □ = 45 000

d □ ÷ 1000 = 653 **e** 10 × □ = 9500 **f** □ ÷ 10 = 86

g 420 × □ = 4200 **h** □ ÷ 16 = 10 **i** 2800 ÷ □ = 100

17 A group of 100 children went on a school trip to a theme park.

The total cost of the trip was £1200. How much did each child pay?

18 Diesel costs 98p per litre. A truck driver pays for 1000 litres.

a What is the cost in pence?

b What is the cost in pounds?

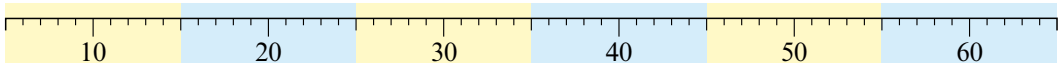
£1 = 100p

explanation 6a | explanation 6b | online

19 Write each number to the nearest 10. Use the diagram to help you.

a 13 **b** 27 **c** 45 **d** 58

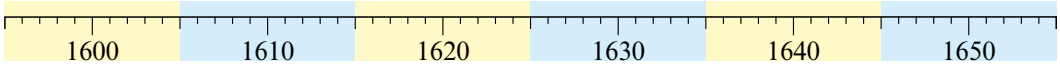
e 42 **f** 6 **g** 64 **h** 15



20 Write each number to the nearest 10. Use the diagram to help you.

a 1623 **b** 1639 **c** 1644 **d** 1602

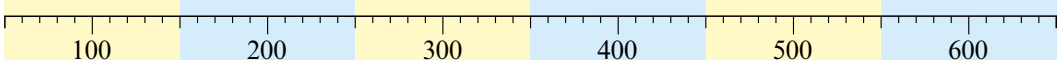
e 1654 **f** 1618 **g** 1597 **h** 1645



21 Write each number to the nearest 100. Use the diagram to help you.

a 162 **b** 349 **c** 274 **d** 563

e 92 **f** 251 **g** 145 **h** 46



22 Mr Harrison is the Head at Northfield school. He wants to know approximately how many merits have been awarded to pupils aged 12 this year.

a Round the number of merits for each class to the nearest 100.

i 7A had 237 **ii** 7B had 382

iii 7C had 195 **iv** 7D had 450

b Estimate how many merits have been given to pupils aged 12 this year.

23 Here are the crowd figures for the first game in one football season.

Round each one to the nearest 1000.

a Real Madrid: 64 867 **b** Le Mans: 32 131 **c** Hamburg: 49 713

d Millwall: 10 012 **e** Luton Town: 8131 **f** Stoke City: 8971