Number

1 Place value

Test (p. 8)

1 18 000
2 0.305
3 73 100
4 100
5 5
6 $x = 3$; $y = 3$ hundredths
7 66 ⑥66
8 700
9 8000
10 1.6

Practice box (p. 11)

1 10 – 345 680 100 – 345 700
1000 – 346 000 10 000 – 350 000
2 tenth – 476.5 hundredth – 476.53

2 Addition and subtraction problems

Test (p. 11)

1 1321
2 4645
3 962 m
4 60
5 273
6 25
7 £3.66
8 £10.49
9 4751
10 1179

Practice box (p. 13)

10 474

Practice box (p. 13)

1 157
2 598

3 Multiplication and division problems

Test (p. 14)

1 20
2 £41.70
3 34 650
4 20
5 £4.08
6 7
7 40
8 9000
9 90
10 12

Practice box (p. 15)

14 256 kg

Practice box (p. 16)

21

4 Mixed or several-step problems

Test (p. 17)

1 £3.65
2 8
3 600 ml
4 23
5 300 grams
6 6.9 kilograms
7 0.27 m
8 £2.80
9 105
10 £4.90

Practice box (p. 19)

166

5 Factors and multiples

Test (p. 19)

1 32, 40, 48, 56, 64
2 12
3 4, 6, 8
4 1, 2, 3, 4, 6, 8, 12, 16, 24 and 48
5 63, 70, 77 and 84
6 8
7 60
8 7 and 11
9 2, 2, 3 and 3
10 91

Practice box (p. 21)

21: 1, 3, 7 and 21
35: 1, 5, 7 and 35
56: 1, 2, 4, 7, 8, 14, 28 and 56
HCF = 7

Practice box (p. 22)

First five multiples of 12: 12, 24, 36, 48 and 60
LCM = 24

6 Special numbers

Test (p. 22)

1 +13°C
2 34
3 34
4 7^2
5 125
6 11
7 41, 43 and 47
8 X
9 13, 14 and 15
10 36

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Practice box (p. 25)
XX: 20
XXXV: 35
CL: 150

Practice box (p. 26)
1 31
2 118

7 Sequences

Test (p. 26)
1 $6\frac{1}{2}$
2 81
3 73
4 32
5 16
6 9
7 6
8 0.625
9 10
10 15

Practice box (p. 28)
25, 11

8 Equations and algebra

Test (p. 29)
1 137
2 11
3 $x = 12$; $y = 287$
4 45
5 7
6 8
7 $x = 12$
8 $x = £3.90$
9 $a = 4$
10 150

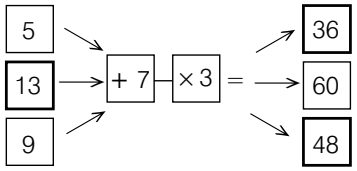
Practice box (p. 30)
$b = 16$; $y = 5$

Practice box (p. 30)
$\frac{15}{16}$ 10

Practice box (p. 31)
$y = 11$; $z = 27$, $a = 7$

9 Function machines

Test (p. 32)
1 63
2 30
3 48
4 87
5 30
6 28
7 37
8 3
9



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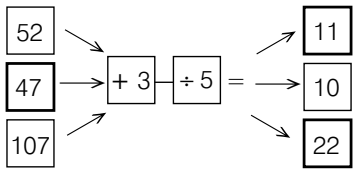


Practice box (p. 34)
83

Fractions and decimals

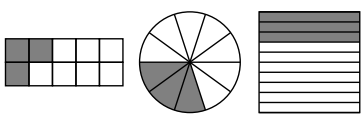
10 Fractions

Test (p. 35)
1 135
2 £6.50
3 20
4 $\frac{7}{8}$ $\frac{3}{4}$ $\frac{1}{2}$ $\frac{2}{5}$ $\frac{3}{8}$ $\frac{1}{3}$ $\frac{1}{4}$
5 $3\frac{5}{7}$
6 28
7 2
8 $\frac{2}{5}$
9 $\frac{4}{6}$ $\frac{1}{3}$
10 $8\frac{3}{5}$

Introduction

Practice box (p. 36)

$\frac{3}{10}$ =



Fractions of numbers

Practice box (p. 43)
9; 35;14
7; 32; 25

Mixed numbers

Practice box (p. 37)

$6\frac{4}{5}$ =

$4\frac{3}{8}$ =

Improper fractions

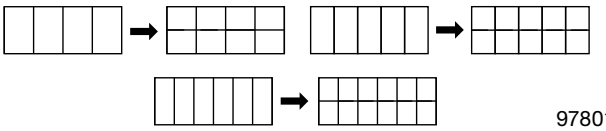
Practice box (p. 38)
$1\frac{1}{6}$; $24\frac{1}{4}$

Equivalent fractions

Practice box (p. 38) For example:
$\frac{4}{5} = \frac{8}{10}$ $\frac{12}{15}$ $\frac{16}{20}$

$\frac{3}{8} = \frac{6}{16}$ $\frac{9}{24}$ $\frac{12}{32}$

Practice box (p. 39)



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Fraction calculations

Practice box (p. 39)

$1\frac{1}{4}$; $\frac{5}{8}$

Simplifying fractions

Practice box (p. 40)

$\frac{1}{7}$; $\frac{1}{2}$; $\frac{7}{10}$

11 Decimal fractions

Test (p. 41)

1 3.03 3.3 3.33 3.333 3.42
2 6.3
3 $\frac{21}{25}$
4 41.391
5 0.008
6 1.468
7 2.1
8 0.27
9 0.6 l
10 12.6

Converting between decimal and vulgar fractions

Practice box (p. 43)

0.35; 0.678; 0.75
0.125; 0.35; 0.8

Practice box (p. 43)

$5\frac{4}{5}$; $11\frac{7}{10}$; $23\frac{3}{500}$

$5\frac{7}{25}$; $7\frac{1}{2}$; $4\frac{3}{25}$

Practice box (p. 44)

3.142, 3.214, 3.241, 3.412, 3.421

Add, subtract, multiply and divide

Practice box (p. 45)

5; 5; 35
16; 20; 20

12 Percentages

Test (p. 46)

1 40p
2 £187.50
3 336
4 24
5 £28
6 45%
7 60%
8 882
9 £14 950
10 £94

Practice box (p. 47)

306; £7; £69

Practice box (p. 48)

£264.50

13 Ratio and proportion

Test (p. 49)

1 9
2 3 : 2
3 27
4 6
5 £35
6 £2
7 25
8 £24
9 39
10 8

Practice box (p. 51)

12

Handling data

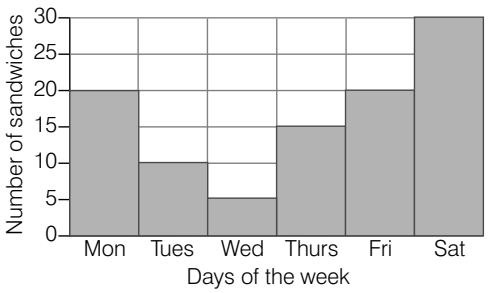
14 Organising and comparing information

Test (p. 52)

1 30
2 15 kg
3 11.30 a.m.; 1 km
4 5
5 4
6 13 km/h
7 School B
8 17
9 9
10 31

Practice box (p. 55)

1



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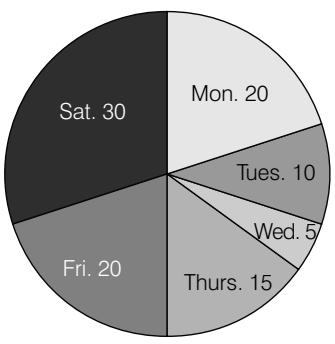

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15 Mean, median, mode and range

Test (p. 56)

1 7
2 124 km
3 81 km/h
4 19
5 10
6 15
7 49
8 36
9 10 years 11 months
10 160 km

Practice box (p. 57)
Range: 4 Mode: 6 Median: 6 Mean: 6

16 Probability

Test (p. 58)

1 $\frac{1}{6}$;
2 $\frac{1}{2}$
3 $\frac{1}{52}$
4 $\frac{1}{36}$
5 $\frac{1}{6}$
6 $\frac{1}{3}$
7 $\frac{5}{10}$
8 $\frac{3}{7}$
9 $\frac{4}{7}$
10 0

Practice box (p. 60) $\frac{5}{36}$

Shape and space

17 2D shapes: circles, angles and bearings

Test (p. 61)

1 120°
2 180°
3 60°
4 43°
5 38 mm
6 110°
7 13 mm
8 Y
9 N
10 5 mm

18 2D shapes: triangles

Test (p. 64)

1 55°
2 Equilateral
3 42 cm²
4 70°
5 Scalene
6 70°
7 E
8 9 cm²
9 1
10 Acute-angled triangle

Types of triangle

Practice box (p. 66)
180°

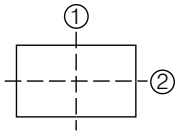
Area of a triangle

Practice box (p. 67)
1 6 cm² **2** 5 cm² **3** 9 cm²

19 2D shapes: quadrilaterals and polygons

Test (p. 68)

1 D
2 A = rhombus B = parallelogram C = kite D = square E = trapezium
3 50°
4 D
5 B
6



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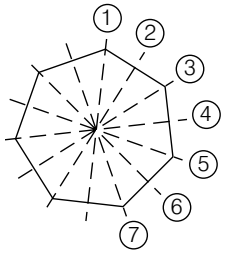

8 130°
9 Heptagon
10 Octagons and squares

Quadrilaterals

Practice box (p. 70)
360°

20 Perimeter and area

Test (p. 72)

1 12 m
2 44 m
3 15
4 16 cm²
5 48 cm²
6 66 m²
7 Accept any answer between 130 m² and 150 m²
8 14 mm
9 44 m²
10 B and D

Practice box (p. 75)
Length = 13 cm Perimeter = 40 cm

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21 3D shapes

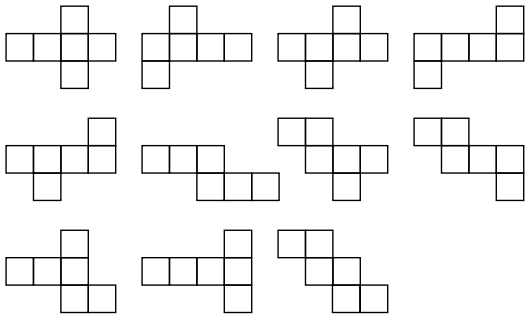
Test (p. 76)

1 Triangular prism
2 Square-based pyramid
3 6 cm
4 24
5 C and D
6 6
7 3
8 12
9 12
10 Two pentagons and five squares

Nets

Practice box (p. 77)

11 nets of a cube:



22 Volume and capacity

Test (p. 79)

1 48 cm^3
2 15 m^3
3 144 cm^3
4 10 cm
5 39
6 800 ml
7 2300 ml
8 3400 ml
9 800 ml
10 50 ml

Volume

Practice box (p. 81)

86 cm^2

Capacity

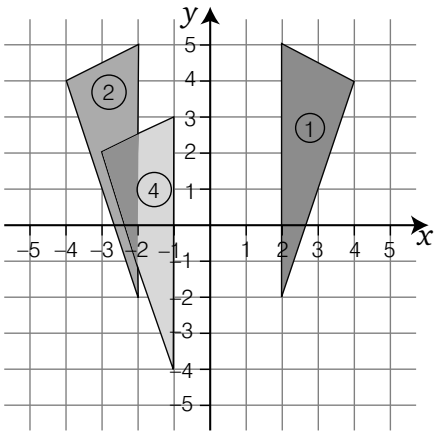
Practice box (p. 81)

1 3.1 litres; 2.2 litres; 5.8 litres
2 7300 ml; 1100 ml; 6700 ml

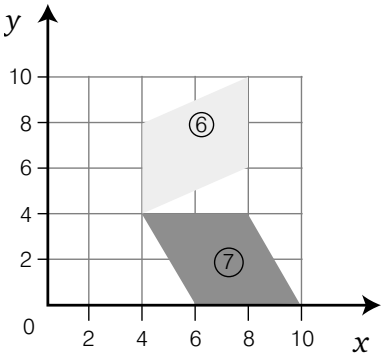
23 Transformations: coordinates, reflection, rotation and translation

Test (p. 82)

1

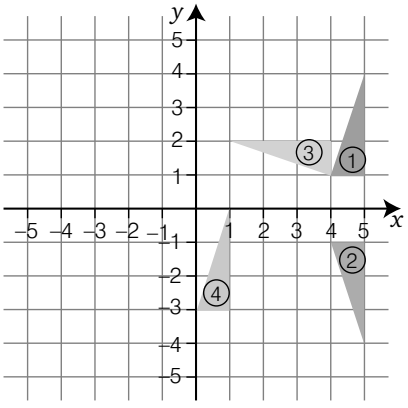


2 See picture above
3 (–2, –2), (–4, 4), (–2, 5)
4 See picture above
5 (–1, –4), (–3, 2), (–1, 3)
6 Rhombus



7 See picture above
8 (4, 4), (6, 0), (10, 0) (8, 4)
9 (3.8, 4.1)
10 (5, 2)

Practice box (p. 85)



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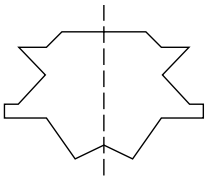
24 Symmetry

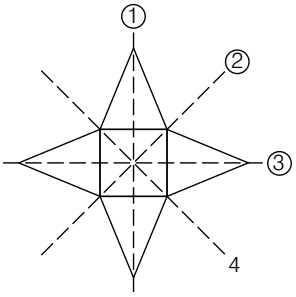
Test (p. 86)

1 C
2 B
3 D
4



5 6

6



7 3
8 B
9 C
10 A

Measurement

25 Metric and imperial units of measurement

Test (p. 88)

1 200 cm
2 3600 ml
3 12 kg
4 20 km
5 3 l
6 200 cm
7 oz
8 11 feet
9 4 pints
10 32 kg

26 Reading scales

Test (p. 91)

1 2 kg 600 g
2 600 g
3 4 m 400 cm
4 £1.26
5 46 kg 700 g
6 140 g
7 225 g
8 12 000 m
9 26 000 m
10 66 ml

Practice box (p. 93)

a 625 ml
b 400 ml
c 900 ml
d 850 ml

27 Time and timetables

Test (p. 94)

1 8.35 p.m.
2 13.40
3 42 min
4 3 hours 20 min
5 29
6 19 June
7 00.50
8 96
9 60
10

	Train A arrives at	Train B arrives at
Stokesby	06.45	07.30
Linton	07.08	07.53
Doole	07.36	08.21
Pimwich	08.12	08.57
Langford	08.19	**09.04**
Pagnell	08.24	09.09

09.04

Practice box (p. 96)

4 hours 42 minutes

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Standard 11+ maths test (Central pull-out section)

1 20
2 8000
3 2 m 3 cm
4 66°
5 294°
6 8.4 cm
7 72
8 (2, 5.5)
9 (5.5, 3.5)
10 (1, 2.5)
11 (4, 1)
12 15, 18, 20
13 £1500
14 6.10
15 6
16 9
17 3 : 4
18 12
19 52%
20 84
21 £1.70
22 2.47
23 $\frac{7}{8}$
24 5
25 $6 \times 6 \times 6 \times 6 \times 6$
26 $3a = 5b$
27 6
28 4
29 Yes
30 No
31 No
32 No
33 No
34 28 cm
35 a – 12
36 90
37 2250
38 $1\frac{19}{25}$
39 $\frac{2}{11}$
40 8
41 20 m
42 13 m^2
43 £104
44 £14.25
45 £5.75
46 £623.75
47 9
48 20
49 04.45
50 1.7 m

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