Check in 1

1 **a** 20 **b** 4 **c** 7 **d** 7.5

2 3.085, 3.8, 3.825, 3.83, 3.9

MyReview 1

1 **a** 0.076 **b** 4510 **c** 1520
d 920 **e** 2.168 **f** 3.6

2 **a** 7200 **b** 8290000
c 0.041 **d** 0.000308

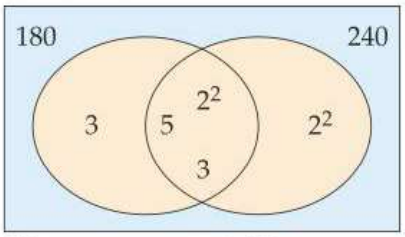
3 **a** 10^7 **b** 10^7 **c** 10^{16}
d 10 **e** 10^3 **f** 10^4

4 **a** 300 **b** 270 **c** 271
d 271.1 **e** 271.10 **f** 271.099

5 **a** 500 **b** 30000 **c** 6
d 0.3 **e** 0.09 **f** 1

6 **a** $2^3 \times 3^3 \times 11$ **b** $2 \times 3 \times 7 \times 13$
c $2^3 \times 5 \times 17$

7 **a**



b 60 **c** 720

8 **a** 800 **b** 4 **c** 30
d 320000 **e** 0.9 **f** 70

9 **a** £16
b £1.48 × 36 ≈ £1.50 × 40 ≈ £60. This is an underestimate, £60 will be enough.

Check in 2

1 **a** 30 cm, 50 cm^2 **b** 24 cm, 36 cm^2
c 36 cm, 48 cm^2

2 36 m^3

3 **a** 5500 **b** 40

MyReview 2

1 **a** 4900 mm **b** 0.87 l **c** 470 g
d 90 mm^2 **e** 30000 cm^2 **f** 3000 cm^3

2 **a** 1.8 l **b** 10.9 kg
c 144 km **d** 0.975 m

3 28 cm^2

4 8 cm

5 42.5 m^2

6 **a** 153.9 cm^2 **b** 44.0 cm

7 **a** 153.9 cm^2 **b** 50 cm

8 **a** 40 miles per hour **b** 11.3375 g/cm^3

Check in 3

1 **a** **i** $3n + 4$ **ii** 22
b **i** $3(n + 4)$ **ii** 30

2 **a** 32 **b** $13x + 7$

MyReview 3

1 **a** $3(5x - 1)$ **b** $8(a + 3b)$
c $24p(q + 2)$ **d** $7(3 - 4v)$

2 **a** $x(x + 8)$ **b** $3x(x + 3y)$
c $z(z^2 + 3z - 1)$ **d** $4y^2(4y - 3)$

3 **a** $2r$ **b** $\frac{pq}{5}$
c $3ab$ **d** $\frac{3x}{4yz}$

4 **a** $\frac{x}{52}$ **b** $\frac{a}{14}$
c $\frac{19y}{24}$ **d** $\frac{11b}{24}$

5 72

6 **a** $x = 2a + 3b$ **b** $x = \frac{y - 15}{2}$
c $x = \sqrt{\frac{5z - 4y}{3}}$

7 **a** $v = \sqrt{\frac{2E}{m}}$ **b** 7.56 **c** 22.2

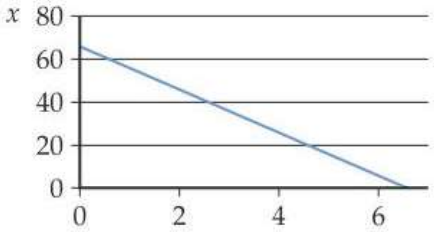
8 **a** $A = 48p$ **b** 6 cm

9 **a** $A = 66 - 10x$

b

x (cm)	1	2	3	4	5	6
A (cm^2)	56	46	36	26	16	6

c



Check in 4

1 **a** 12 **b** 35 **c** 5

2 **a** £4.50 **b** 22 km **c** £23.04

3

Fraction	Decimal	Percentage
$\frac{13}{20}$	0.65	65%
$\frac{5}{8}$	0.625	62.5%
$\frac{2}{25}$	0.08	8%

4 **a** 35 **b** 24 **c** 30 **d** 48

5 **a** 5 **b** 14 **c** 126

MyReview 4

1 **a** $\frac{17}{32}$ **b** $\frac{9}{20}$ **c** $\frac{15}{28}$ **d** $\frac{61}{84}$

2 **a** $\frac{109}{28}$ **b** $\frac{23}{18}$ **c** $\frac{151}{24}$ **d** $\frac{23}{12}$

3 **a** £16.36 **b** 17.78 kg
c 14.67 m **d** 571.43 m

4 **a** $\frac{12}{7}$ **b** $\frac{21}{4}$ **c** $\frac{9}{110}$ **d** $\frac{3}{14}$

5 **a** $\frac{56}{3}$ **b** $\frac{4}{3}$

6 **a** 0.15 **b** 0.2
c 1.1 **d** 0.225

7 **a** 92 **b** 148.8

8 £928.80

9 16%

10 9.3%

11 B

Check in 5

1 **a** 63° **b** 54° **c** 49°

2 A rectangle, B rhombus,
C isosceles trapezium, D arrowhead,
E parallelogram, F kite, G square

MyReview 5

1 $a = 97°$, corresponding angles are equal
$b = 21°$, angles in triangle add up 180°
$c = 114°$, other two angles in triangle are 66 since it is isosceles, angles on a straight line add up 180°
$d = 88°$ angles at top of triangle are both 46° (angles straight line, isosceles triangle)

2 $a = 109°$ $b = 144°$ $c = 36°$

3 **a** 8 **b** 8 **c** 135° **d** 45°

4 **a** yes **b** yes **c** no **d** yes

5 **a** 9 cm **b** 132° **c** 48°

6 Check student's drawings

Check in 6

1 **a** $y = 2$ **b** $y = 0$ **c** $y = 8$

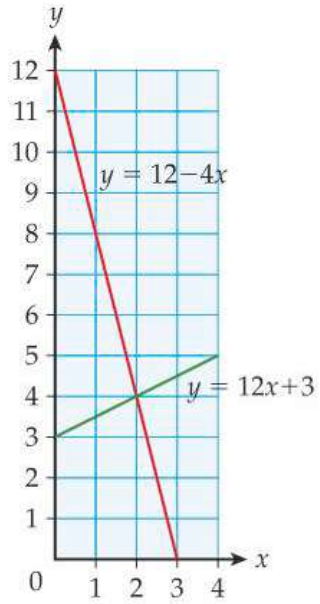
2 **a** Check students' drawings
b D(3, -2)
c 48 square units

MyReview 6

1 **a**

x	0	1	2	3
y	12	8	4	0

b,c



d (2, 4)

2 yes

3 **a** $y = 2x - 1$ **b** $y = 6 - x$
c $y = \frac{1}{2}x + 2$ **d** $x = 6$

4 (0, 8), (6, 0)

5 **a** $\frac{1}{2}$ **b** 14

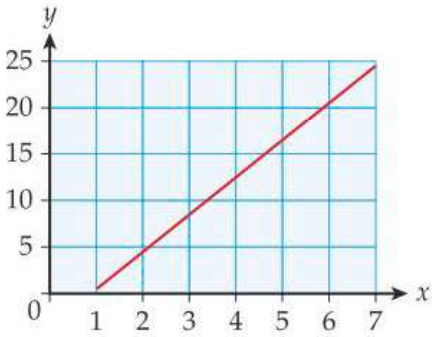
6 **a** 11 **b** 0

7 **a** $\frac{1}{2}x^2 = \frac{1}{2} \times 4^2 = 8\text{cm}^2$

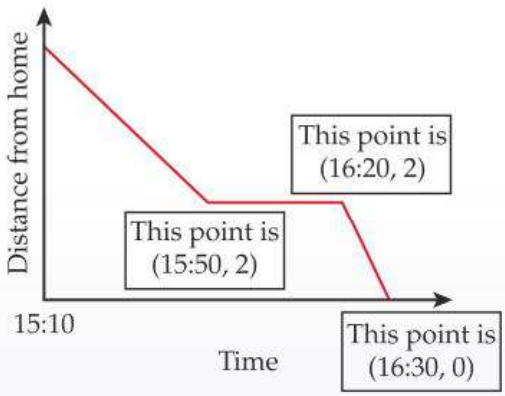
b

x	1	2	3	4	5	6	7
A	0.5	2	4.5	8	12.5	18	24.5

c



8



9 **a** week 4 **b** week 2

Check in 7

1 **a** 290 **b** 3.86 **c** 420 **d** 4.2

2 **a** **i** 2500 **ii** 2460 **iii** 2456.8

b **i** 900 **ii** 930 **iii** 928.3

3 **a** 9.5 **b** 6.4 **c** 18.7 **d** 8.9

e 143 **f** 1075 **g** 7406 **h** 30.8

4 **a** 15.8 **b** 16 **c** 18.9 **d** 29.4

5 **a** 28 **b** 8

MyReview 7

1 **a** 94.963 **b** 129.88

c 8.758 **d** 44.2411

2 53.37 kg

3 **a** 13.95 **b** 22.96

c 8.904 **d** 1289.28

4 £5.94

5 **a** 5 r4 **b** 54 r5

c 77 r6 **d** 52 r2

6 **a** 220 **b** 211.7

c 636.3 **d** 403.7

7 **a** 45 **b** 1.54

c 1647.09 **d** 0.62

8 **a** 20 m, 95 cm **b** 27 min, 58 s

c 5 m, 24 cm, 3 mm

d 4 weeks, 6 days, 2 hr, 8 min

9 **a** 43 **b** 50 ml

Check in 8

1 **a** 7 **b** 19.25 **c** 5.82

2

Division 1		Division 2
0	6	6
6 3 2 1 0 0	5	0 0 3
8 4 3 2	4	0 0 2 2 3 3 5 5 8
9 8 7 6 5 5 5 3 2	3	0 6 6 8 8 8 9 9
	2	3
9	1	

MyReview 8

1

Time	Chaffinch	Sparrow	Starling	Wood Pigeon
Morning				
Afternoon				
Evening				

2

Weight, w	Frequency
$4.5 \leq w < 5$	3
$5 \leq w < 5.5$	2
$5.5 \leq w < 6$	4
$6 \leq w < 6.5$	3
$6.5 \leq w < 7$	2
$7 \leq w < 7.5$	2

3 chocolate 13
strawberry 8
vanilla 10
mint choc-chip 2
other 5

4 **a** increasing **b** 1981~1991

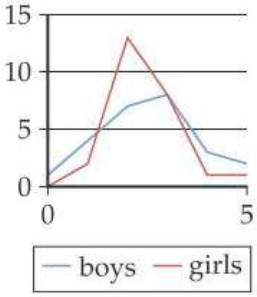
5 **a** 30 **b** 28.9

c 29.5 **d** 4

6 **a** 19 **b** 10-14

c 10.5 **d** 10.9

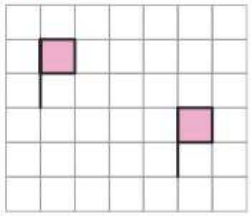
7 **a**



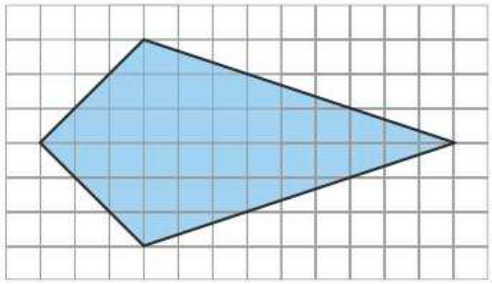
b e.g. mode for boys higher than girls, boys have bigger range

Check in 9

1



2



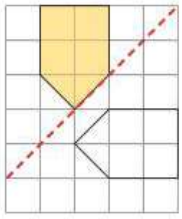
3 **a** 2.3 m **b** 4 km
c 5500 m **d** 450 000 cm

4 **a** 40° **b** 140°
c 220° **d** 320°

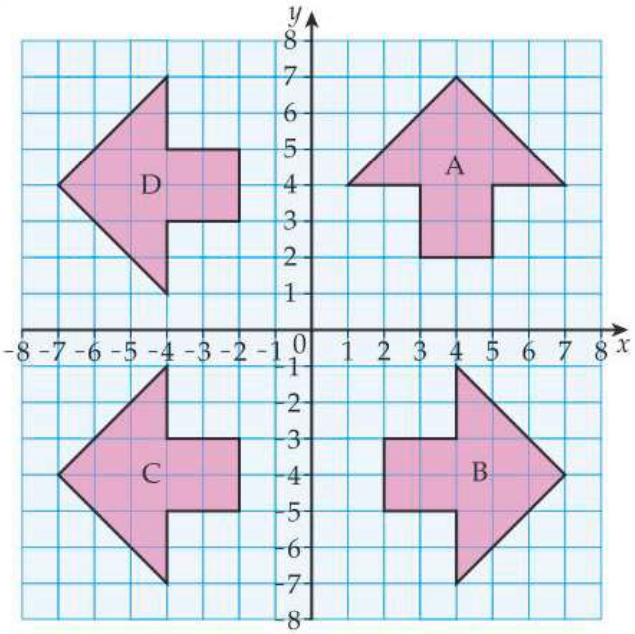
MyReview 9

1 **a** translation of 1 unit left and 5 units down
b rotation of 90° anti-clockwise about (0, 0)
c reflection in the y-axis / line $x = 0$

2



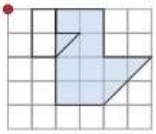
3 **a,b,c**



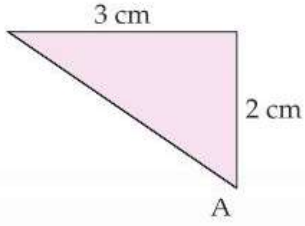
d rotation 90° anticlockwise about (0, 0)

4 scale factor 3, centre of enlargement (4, 4)

5



6 **a**



b 10.8 m

7 **a** 042° **b** 222°
c 294° **d** 114°

Check in 10

1 **a** $3 \times 3 \times 3 = 27$ **b** $3^2 = 9$

2 **a** 8 **b** 16 **c** 3 **d** 48

4 **a** $8x + 7y$ **b** $6x + 9y$

5 **a** 13 **b** $11x + 25$

MyReview 10

1 **a** 9 **b** $\frac{1}{2}$ **c** -2
d $-\frac{3}{2}$ **e** 3 **f** 12
g 10

2 **a** -4 **b** 6 **c** 11
d -1

3 **a** 2 **b** -12 **c** 24
d -13 **e** -3 **f** 16

4 **a** 56 **b** 4 **c** 5

5 5.8

6 **a** 2.4 **b** 2.6 **c** 4.3

7 3.6

Check in 11

1 **a** 3 **b** 5

2 **a** 1024 **b** 1024 **c** 1024
All answers = $2^{10} = 1024$

3 16, 25, 49, 100

4 8, 27, 1000

MyReview 11

1 **a** 24 **b** 35

2 **a** 26.5 **b** 5.8

3 **a** $3a^2$ **b** $6b^3c^2$ **c** $4d^6$
d $e^{10}f^3$ **e** g^4h^6 **f** i
g j^2k^6 **h** m^8 **i** $n^{15}p^{10}$
j $2q^5$ **k** $4r^2s$

4 **a** 5 **b** 6
c 12 **d** 20

5 **a** $2\sqrt{7}$ **b** $6\sqrt{2}$
c $5\sqrt{5}$ **d** $11\sqrt{3}$

6 **a** $3\sqrt{2}$ **b** $2\sqrt{15}$
c $42\sqrt{3}$ **d** $60\sqrt{3}$

7 **a** $3^{\frac{1}{2}}$ **b** $4^{\frac{1}{3}}$
c $7^{\frac{1}{2}}$ **d** $10^{\frac{1}{3}}$

8 **a** 5 **b** 10
c 11 **d** 4

9 **a** 82000000 **b** 5420
c 0.00031 **d** 0.00000609

10 **a** 5.6×10^3 **b** 8.73×10^5
c 6.2×10^{-2} **d** 1.07×10^{-4}
e 2.45×10^6 **f** 4.2×10^{-2}

Check in 12

1 Check students' drawings
2 **a** 9 **b** 144 **c** 9 **d** 14
3 Check students' drawings

MyReview 12

1 **a** check ASA: 112°, 6.5 cm, 40°
b check SAS: 75 mm, 44°, 75 mm
or ASA: 68°, 75 mm, 44°
2 check SSS: 5.2 cm, 6.3 cm, 9.1 cm
3 **a** check circle radius of 3 cm
b check circle radius of 4 cm with the same centre as circle in part a
4 check angle of 164° bisected to two 82° angles
5 **a** 12.1 cm **b** 5.7 cm **c** 88.7 mm
6 yes
7 **a** 6.32 **b** 19.6

Check in 13

1 **a** £63 **b** £153
2 **a** 2 **b** 36

MyReview 13

1 **a** double (the previous term); 16, 32
b halve; 5, 2.5
c double then add 1; 47, 95
2 **a** add 3 **b** 13
c

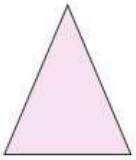
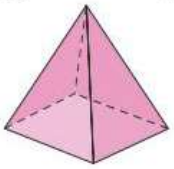
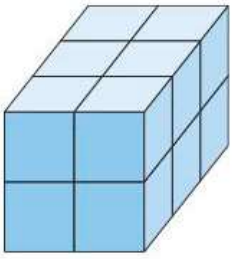
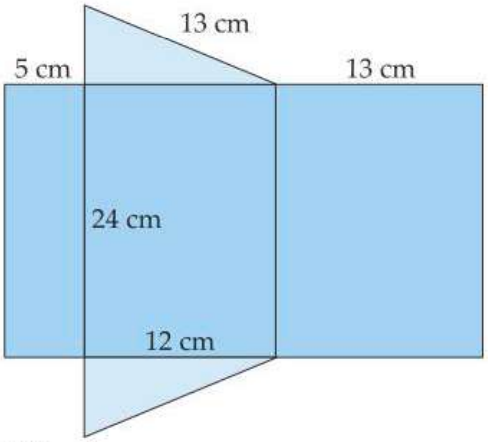
Position	1	2	3	4
..3... times table	3	6	9	12
term	4	7	10	13

d multiply (the position) by 3 then add 1
e 61
3 **a** multiply (the position) by 4 then add 1
b multiply by 7 then add 11
c multiply by 0.5 then add 3
d subtract the position from 10
4 **a** 4, 10, 16, 22, 28
b -0.5, 0, 0.5, 1, 1.5
c 8, 10, 12, 14, 16
d 10, 8, 6, 4, 2
5 **a** $2n + 1$ **b** $10n - 2$
c $5n - 10$ **d** $13 - 3n$
6 **a** 73, 68, 63, 58, 53, 48, 43
b 8 **c** Tuesday
7 **a** $T(1) = 5$, $T(n + 1) = T(n) + 3$
b $T(1) = 16$, $T(n + 1) = T(n) - 5$
c $T(1) = 3$, $T(n + 1) = 2T(n)$
d $T(1) = 324$, $T(n + 1) = \frac{1}{3}T(n)$

Check in 14

1 **a** Square
b Equilateral triangle
c Regular pentagon
d Regular hexagon
e Regular octagon
2 **a** 40 cm², 16 cm³ **b** 42 cm², 18 cm³
3 **a** 405 cm² **b** 50 cm²

MyReview 14

1 **a** 8 **b** 18 **c** 12
2 **a** 
b 
c 
d square-based pyramid
3 **a** 
b 12
4 3
5 **a** 

b 780 cm²
6 294 cm²
7 1728 cm³
8 80 cm³

Check in 15

1 **a** **i** $\frac{2}{5}$ **ii** 40%

b **i** $\frac{3}{4}$ **ii** 75%

c **i** $\frac{3}{8}$ **ii** 37.5%

d **i** $\frac{3}{10}$ **ii** 30%

2 **a** 1:3 **b** 2:3 **c** 1:5 **d** 3:1

MyReview 15

1 £1.60

2 0.315g

3 A

4 **a** 2:4:3 **b** 2:9

5 **a** 350m, 250m **b** £18, £72, £27

6 **a** 1:2.4 **b** 1:1.5

7 **a** 600m **b** 8cm

8 $\frac{3}{7}$ or 42.9%

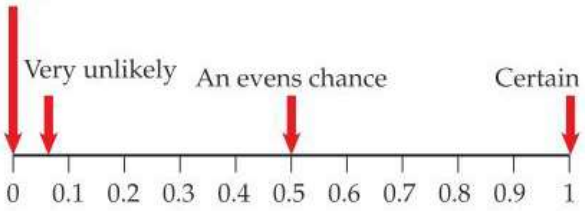
9 £95

10 25%

11 **a** 0.454 **b** 2.20 (2dp)

Check in 16

1 Impossible



2 The probability of getting a prime number

$= \frac{\text{Number of prime scores}}{\text{Total number of scores}} = \frac{3}{6} = \frac{1}{2}$

3 **a** 0.6 **b** 0.625 **c** 0.45

d 0.15 **e** 0.27 **f** 0.037

MyReview 16

1 **a** no **b** no **c** yes

2 **a** $\frac{1}{2}$ **b** $\frac{1}{2}$ **c** $\frac{3}{10}$ **d** $\frac{2}{5}$

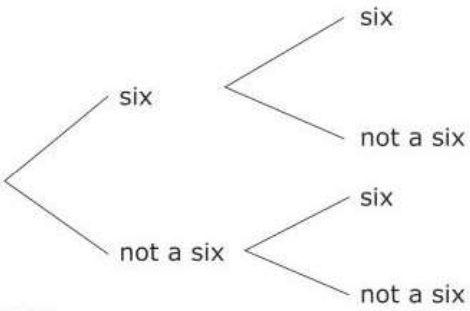
3 **a** $\frac{1}{6}$ **b** $\frac{1}{3}$ **c** $\frac{1}{3}$ **d** 0

4 **a**

×	1	2	3	4	5	6
1	1	2	3	4	5	6
2	2	4	6	8	10	12
3	3	6	9	12	15	18
4	4	8	12	16	20	24
5	5	10	15	20	25	30
6	6	12	18	24	30	36

b $\frac{13}{36}$

5

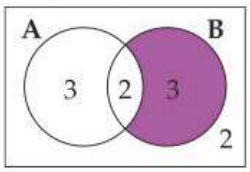


6 0.22

7 **a** 0.1, 0.1, 0.3, 0.3, 0.2 **b** all 0.2

c could be fair, results not unreasonable, not enough evidence

8 **a,b**



c $\frac{3}{10}$

d C is a proper subset of A.

e B and C are mutually exclusive.