Answer Key Chapter 9

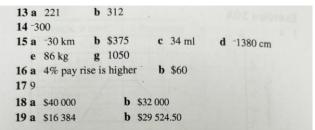## Student book

Summary
Check Out

1 a $= 80°$ b $= 66°$
2 a $a = 38°, b = 142°$ b $c = 64°, d = 116°$
3 $a + b + c = 180°$ because angles in triangle add up to $180°$
$b + x = 180°$ because angles on a straight line add up to $180°$
$a + b + c = b + x$ because they both equal $180°$
Subtracting b from both sides gives us: $a + c = x$
4 $a = 120°, b = c = 60°, d = e = 80°$
5 a $(3, 5)$ b $(4.5, 3)$

Chapter 9
Check in

1 a 0.3   b 0.8   c 0.625   d 0.35
2 a i $\frac{3}{4}$ ii $\frac{11}{12}$ iii $4\frac{1}{6}$

   iv $1\frac{50}{63}$ v $\frac{1}{6}$ vi $1\frac{7}{8}$

   b $\frac{5}{6}$ litre

3 a 840   b 1127   c 4056
   d 8308   e 1248

Exercise 9A

1 12, $3.2 \times 4 = 12.8$; 63, $6.9 \times 3\ 9 = 62.1$; 240, $32.5 \times 8 = 260$;
   6, $1.68 \times 3 = 5.04$; 130, $12.4 \times 13 = 161.2$
2 a 3.2   b -5.4   c 11.5   d 37.6
   e -8.4   f -7.2   g 4.62   h -2.6
   i -25.92   j 58.2
3 $5.40
4 8.4 kg
5 a 85.5   b -85.5   c 8.55   d 8.55
   e 8.55   f 0.855
6 They both involve multiplying the digits 234×6 and they both
   have 3 d.p. in the question so will have 3 d.p. in the answer.

7 a 1.7   b 2.136   c 0.16   d 5.005
   e 0.164   f 0.288   g 24.92   h 0.0272
   i 3.164   j 0.192   k 4.779   l 0.0036
   m 0.322   n 0.988   o 5.29   p -2.59
   q 0.1044   r 0.04
8 65 m
9 $923.64
10 a 0.951   b 0.872   c 7.896   d 0.495
    e 0.9166   f 5.22   g 5.904
11

×	0.8	1.2
-5	-4	-6
0.5	0.4	0.6
0.25	0.2	0.3
0.125	0.1	0.15

12 30.25 cm²
13 a 2.08   b 3.22   c 0.12   d 0.256

Exercise 9B

1 a by 9   b 10   c 10   d $720 \div 9 = 80$
2 x, -60, 2, 30
3 a i 8   ii 8   b i 7   ii 7
   c i -8   ii -8   d i 16   ii 16
   e i 9.1   ii 9.1
4 a 14   b -160   c -190   d 2.5
   e 230   f 12   g 2.3
5 a 24.5   b 17.2   c 12.6   d 430
   e 214
6 6 cm
7 0.62 m/s
8 a $8.20   b $6.15

Exercise 9C

1

To increase by 35%	× by 0.65
To decrease by 35%	× by 1.3
To decrease by 5%	× by 1.35
To increase by 30%	× by 0.7
To decrease by 30%	× by 1.05
To increase by 5%	× by 0.95

2 Kulwinder has increased by 80%; Lee has decreased by 8%
   The correct working is
   $24\,000 \times 1.08 = 25\,920$
   New cost $25920
3 a 1.12   b 0.83   c 0.4   d 1.24
   e 0.96   f 1.08   g 0.82   h 1.8
   i 1.125   j 0.945   k 5   l -2
4 5390 t
5 a 170 km   b $1125   c 459 ml   d 4370 cm
   e 129 kg   g 1350
6 $138
7 a $252   b $392
8 $85.80
9 74.8 kg
10 156
11 $285
12 57.6 kg

13 a 221   b 312
14 -300
15 a -30 km   b $375   c 34 ml   d -1380 cm
    e 86 kg   g 1050
16 a 4% pay rise is higher   b $60
17 9
18 a $40 000   b $32 000
19 a $16 384   b $29 524.50

Exercise 9D

1 Subtract $2\frac{2}{9}$ from $3\frac{2}{9}$ to get 1, then add this to $2\frac{1}{8}$

2 a 576.477	**b** 284.229	**c** 0.8118	**d** 25.96
3 a 630	**b** 8.48	**c** $5\frac{3}{8}$	**d** 69

1 a $2\frac{1}{6}$	**b** $2\frac{1}{4}$	**c** $3\frac{33}{40}$
2 a $\frac{1}{24}$	**b** $1\frac{17}{30}$	**c** $\frac{3}{20}$
3 a $2\frac{1}{8}$	**b** $1\frac{1}{20}$	**c** $1\frac{1}{10}$

Exercise 9

1 a −14.1	**b** −0.48	**c** −6.4	**d** −8.8
2 a 67.86	**b** −67.86	**c** 6.786	**d** 0.06786
e 2340	**f** 290		
3 a 1.38	**b** 0.0152	**c** 9.576	**d** 2.496
e 3.12			
4 a 20	**b** 40	**c** 23.9	**d** 144
e 7.9			
5 a $123.60	**b** $131.02		
6 3.78 cm²			
7 a 251.2 m²	**b** 66.5 m		
8 a 1.02	**b** 0.73	**c** 0.47	**d** 1.35
e 1.4			
9 $978.50			
10 7920			
11 a $60.45	**b** $59.15		
12 a 45	**b** 680	**c** $16\frac{1}{4}$	

Summary
Check out

1 a 1.6	**b** 2.96	**c** 7.32	**d** 0.252
e 7.536	**f** 0.5712		
2 a 16	**b** 20	**c** 12	
d 29	**e** 11		
3 a $84	**b** 440 km	**c** 725 g	**d** 28l
4 a 180	**b** 11.48		

Answer Key Chapter 9

Homework book

9A

1. a 26   b 158.3   c 0.4   d 504.5
   e 4700   f 360   g 2910   h 4440
   i 60   j 17.6   k 165430   l 74200
2. a 2.7   b 5.6   c 19.8   d 22.8
   e 28.8   f 62.4   g 45.1   h 7.2
   i 41.4
3. 34.8 m
4. a 2.4   b 1.95   c 5.81   d 14.58
   e 22.84   f 1.144   g 0.865   h 79.44
   i 0.546   j 0.64   k 0.0025   l 22.09
   m 23.22   n -2.952   o 12.25
5. $33.30
6. $1494.78
7. 7424.4 kg
8. 42.25 cm²

9B

1. a 40   b 30   c 12   d 40
   e 15   f 12   g 600   h 160
   i 1200   j 2.5   k 67   l 86
2. a 3.4   b 15.8   c 0.67   d 36.7
   e 27   f 11   g 4.2   h 5.2
   i 0.082
3. a -132.5   b -860   c -3550   d -587.5
   e -340   f -300
4. a $3.45   b $2.76
5. 1.85 cm
6. 1375000
7. 9
8. 28.5

9C

1. a 1.4   b 1.03   c 1.065   d 0.76
   e 0.92
2. a 405 kg   b 56.16 m   c $80.18   d 63 km
   e 502.2l f 858 kg
3. $784
4. $5070
5. $127.50
6. $963.20
7. $442.80
8. 89 675
9. $13 996.80

9D

1. a $2\frac{3}{4}$ b $5\frac{3}{11}$ c $6\frac{4}{11}$ d $3\frac{3}{5}$
   e $9\frac{3}{5}$ f $8\frac{1}{3}$ g $42\frac{1}{2}$ h 127
   i $245\frac{1}{3}$
2. a $4\frac{1}{3}$ b $\frac{2}{9}$ c $5\frac{1}{5}$ d $2\frac{7}{20}$
   e $\frac{4}{45}$ f $1\frac{7}{12}$ g $1\frac{5}{8}$ h $\frac{2}{3}$
   i $\frac{91}{600}$
3. a 2   b $5\frac{1}{5}$ c $6\frac{4}{5}$ d 16
   e $2\frac{34}{43}$ f $10\frac{13}{20}$ g $5\frac{13}{20}$ h $4\frac{1}{4}$
   i $2\frac{1}{2}$