

# Answer Key | Lower Secondary Stage (6-8)

1<sup>st</sup> Semester | 2023-2024

Subject: Math

Chapter: 9

Objectives: To review the answers of chapter 9.

## Student book

**Summary**

**Check Out**

1 a  $= 80^\circ$     b  $= 66^\circ$   
 2 a  $a = 38^\circ, b = 142^\circ$     b  $c = 64^\circ, d = 116^\circ$   
 3  $a + b + c = 180^\circ$  because angles in triangle add up to  $180^\circ$   
 $b + x = 180^\circ$  because angles on a straight line add up to  $180^\circ$   
 $a + b + c = b + x$  because they both equal  $180^\circ$   
 Subtracting  $b$  from both sides gives us:  $a + c = x$   
 4  $a = 120^\circ, b = c = 60^\circ, d = e = 80^\circ$   
 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  $12, 3.2 \times 4 = 12.8; 63, 6.9 \times 3 = 62.1; 240, 32.5 \times 8 = 260;$   
 $6, 1.68 \times 3 = 5.04; 130, 12.4 \times 13 = 161.2$   
 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  $234 \times 6$  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

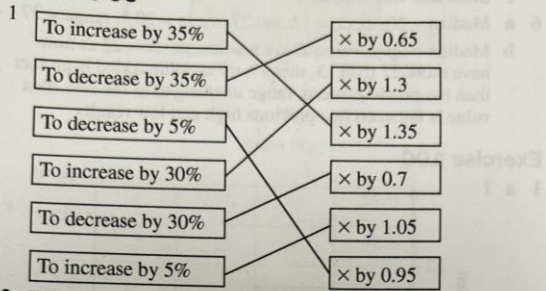
x	0.8	1.2
-5	-4	-6
0.5	0.4	0.6
0.25	0.2	0.3
0.125	0.1	0.15

12  $30.25 \text{ cm}^2$   
 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



2 Kulwinder has increased by 80%; Lee has decreased by 8%.  
The correct working is  
 $24\,000 \times 1.08 = 25\,920$   
New cost \$25 920

- 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 5390t
- 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
- 4 a  $2\frac{1}{6}$     b  $2\frac{1}{4}$     c  $3\frac{33}{40}$
- 5 a  $\frac{1}{24}$     b  $1\frac{17}{30}$     c  $\frac{3}{20}$
- 6 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 cm<sup>2</sup>
- 7 a 251.2 m<sup>2</sup>    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 28 l
- 4 a 180    b 11.48

## 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 34.8m
- 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 cm<sup>2</sup>

### 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  $2\frac{1}{2}$

### 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 502.2 l      f 858 kg
- 3 \$784  
4 \$5070  
5 \$127.50  
6 \$963.20  
7 \$442.80  
8 89 675  
9 \$13 996.80