

S1 Block Test 1 Revision Booklet



Basic Skills

28. Rewrite these numbers in order, putting the **largest** first :- $\frac{3}{4}$, 70%, 0.8.
29. Express 44% as a **fraction**, simplifying it as far as possible.
30. Find 20% of £3.70.
31. Lara scored 24 out of 30 in a test. What **percentage** is this ?
32. Dave has a £20 note, two £10 notes and a two £5 notes in his wallet.
He buys 2 shirts at £12.75 each, 3 ties at £6.50 each and a tie pin costing £3.50.
How much will he have left ?
33. Which of these packs gives the better deal ? (*Explain your answer*)



Pack of 9
- £3.60



Pack of 8
- £3.36

34. I changed £600 into American dollars when the rate was :-
How many dollars did I receive ?

£1 = \$1.50

35. A fashion shop bought in 10 ladies fur lined jackets for £375.
The jackets were sold priced £49.50.
How much **profit** did the shop make altogether if all were sold ?



36. A TV Drama ended at 19:55. Write this in 12 hour form, using am or pm.
37. Change 255 minutes into hours and minutes.

38. Jill went for a 2 mile jog. The first mile took her 6 mins 55 secs.
The second took her 7 mins 20 secs.
How long did Jill's two mile jog take her **altogether** ?



39. Buckie ran a mile in 4 mins 23.85 seconds.
Andrews ran it in the time shown on the stopwatch.
Who was faster and by how much ?



40. The show at the theatre began at 19:35 and finished at 22:20.
How long did the performance last ?

Answers

- a 17000 b 140000
- $13000 + 7000 = 20000$
- a 10000 b 12600
- six hundred and twenty thousand and ten
- a 3650 b 32492 c 5742 d 14488
- a 24138 b 117810 c 942 d 6696
- 455 nl
- a 298 b 6.95 c 0.96
- a 406000 b 5032 c 966000 d 24100
- 80
- a 210 b 0.1 c 13.90
- a 32.45 b 184.81 c 48.72 d 13.76
- a 4060.7 b 0.2208
- a 16 b 8
- 44°C
- a -3 b 4 c -7 d -20
- a 32, 36 b 57, 50 c 0, -5 d 256, 1024
- (0), 9, 18, 27, 36, 45, 54
- 1, 2, 3, 5, 6, 10, 15, 30
- 41, 43, 47, 53, 59
- $\frac{3}{8}$
- $\frac{5}{9}$
- 60%
- 10%
- $\frac{8}{10}$
- $\frac{5}{7}$
- £2.70
- 0.8, $\frac{3}{4}$, 70%
- $\frac{11}{25}$
- 74p
- 80%
- £1.50
- 9 pack - 40p, 8 pack - 42p (9 pack better)
- \$900
- £120
- 7.55 pm
- 4 hours 15 minutes
- 14 min 15 secs
- Buckie by 2.60 seconds
- 2 hr 45 mins

Whole Numbers

Exercise 1a

Add, Subtract,
Multiply & Divide.



1. a A train arrives at a station with 236 people on board.
At the station 108 people get on and 171 people get off.
How many people are on the train now ?




- b The next train to arrive at the station has 6 carriages
Each carriage has 123 people.
Four hundred and sixteen people get off the train.
How many people are now on the train ?

2. a Eve has 6 photo albums. There are 224 photos in each album.
How many photos does Eve have in total ?

- b Pia has 1561 stamps in her collection.
She has seven identical full stamp books.
How many stamps are in each book ?




3. a  How many hours are there in 6300 minutes ?
b There are 24 hours in a day. How many hours are in one week ?
c How many minutes are there in 64 800 seconds ?

4. Ellis bought the following at the supermarket :-

4 kg of potatoes at £1.05/kg, 2 kg of mince at £2.85/kg
1.5 kg of cheese at £2.60/kg 350 g of green beans at 45p/50g.

What was his total bill in the supermarket ?

5.  Four packs of sandwiches and five drinks costs £10.60.
If one drink costs 80p, how much is each sandwich ?

6. (Difficult). A Shirt costs £22 and a pair of trousers costs £27.
Brad spends £191 on shirts and trousers.

How many shirts and how many trousers did he buy ?



Whole Numbers

Exercise 3

Multiples of 10,100, ...



1. Find without a calculator :-

- | | | | | | | | |
|---|--------------------|---|------------------|---|--------------------|---|--------------------|
| a | 34×20 | b | 30×46 | c | 312×30 | d | 103×80 |
| e | 235×200 | f | 262×300 | g | 541×700 | h | 4444×500 |
| i | 132×3000 | j | 18×4000 | k | 304×8000 | l | 3105×9000 |
| m | 14600×200 | n | 600×300 | o | 12000×500 | p | 0×60000 |

2. Find without a calculator :-

- | | | | | | | | |
|---|--------------------|---|--------------------|---|--------------------|---|-------------------|
| a | $460 \div 20$ | b | $3060 \div 30$ | c | $8400 \div 40$ | d | $64800 \div 80$ |
| e | $6000 \div 200$ | f | $90000 \div 300$ | g | $71400 \div 700$ | h | $350000 \div 500$ |
| i | $96000 \div 3000$ | j | $560000 \div 4000$ | k | $568000 \div 8000$ | | |
| l | $9819000 \div 900$ | m | $64200 \div 200$ | n | $150000 \div 2000$ | | |

3. A local football team has a total weekly wage of £8600 for twenty players.

- If all players receive equal pay, how much does each player earn weekly ?
- Each player carries a £145 insurance policy.
What is the total player insurance cost ?

4. a There are 500 tickets in a book, six hundred books in a box and 200 boxes in a crate.

How many tickets are in a crate ?

- A juggernaut carries a total of one hundred thousand bottles of juice in 10 palettes.
Each palette holds 20 containers.
Each container holds 50 boxes.

How many bottles are in a box ?



Exercise 4

BOMDAS



1. Use Bomdass to find :-

- | | | | | | | | |
|---|---------------------------|---|-----------------------------|---|--|---|--------------------|
| a | $3 + 2 \times 4$ | b | $5 + 2 \times 6$ | c | $12 + 10 \times 4$ | d | $10 \times 4 + 5$ |
| e | $12 - 4 \times 2$ | f | $26 - 3 \times 8$ | g | $15 - 2 \times 7$ | h | $20 \times 3 - 60$ |
| i | $\frac{1}{2}$ of $10 + 6$ | j | $18 + \frac{1}{2}$ of 6 | k | $16 - \frac{1}{3}$ of 15 | l | half of $20 + 4$ |
| m | $2 \times (5 + 6)$ | n | $\frac{1}{8}$ of $(12 - 4)$ | o | $((6 \div 2) + 8) \times 3 - (11 - 3)$ | | |

2. Copy each of the following and insert brackets to make each calculation correct :-

- | | | | | | |
|---|---------------------------------|---|------------------------------|---|--------------------------------|
| a | $10 + 5 \times 2 = 30$ | b | $15 - 6 \times 3 = 27$ | c | $\frac{1}{8}$ of $16 + 32 = 6$ |
| d | $10 \times 5 - 2 \times 3 = 90$ | e | $16 \div 2 + 6 \times 3 = 6$ | f | $8 + 2 \times 3 - 2 = 10$ |

Answers

Exercise 1a - Add, Subtract, Multiply & Divide

- a 173 b 322
- a 1344 b 223
- a 105 b 168 c 1080
- £16.95
- £1.65
- 5 shirts and 3 pairs of trousers

Exercise 3 - Multiples of 10, 100, 1000

- a 680 b 1380 c 9360 d 8240
e 47000 f 78600 g 378700 h 2222000
i 396000 j 72000 k 2432000l 27945000
m 2920000n 180000 o 6000000p 0
- a 23 b 102 c 210 d 810
e 30 f 300 g 102 h 700
i 32 j 140 k 71
l 10910 m 321 n 75
- a £430 b £2900
- a 60000000 b 10

Exercise 4 - BOMDAS

- a 11 b 17 c 52 d 45
e 4 f 2 g 1 h 0
i 11 j 21 k 11 l 14
m 22 n 1 o 25
- a $(10 + 5) \times 2 = 30$ b $(15 - 6) \times 9 = 27$
c $\frac{1}{8}$ of $(16 + 32) = 6$ d $10 \times (5 - 2) \times 3 = 90$
e $16 \div (2 + 6) \times 3 = 6$ f $(8 + 2) \times (3 - 2) = 10$

Decimals

Exercise 5

1. Write down the answers to the following :-

- (a) 8.4×10 (b) 9.8×10 (c) 7.62×10 (d) 18.71×10
(e) 6.41×100 (f) 0.91×100 (g) 4.021×100 (h) 0.0054×100
(i) 5.213×1000 (j) 0.8765×1000 (k) 1.0041×1000 (l) 4.2×1000

2. A crate weighs 47.62 kg. What would be the weight of :-

- (a) 10 crates (b) 100 crates (c) 1000 crates (d) 10 000 crates ?

3. There are 1000 millilitres in a litre. How many millilitres are there in :-

- (a) 5 litres (b) 7.62 litres (c) 0.0415 litres (d) 0.01 litres ?

Decimals

Exercise 6

1. Write down the answers to the following :-

- (a) $28.6 \div 10$ (b) $19.8 \div 10$ (c) $7.62 \div 10$ (d) $187.1 \div 10$
(e) $64.1 \div 100$ (f) $10.91 \div 100$ (g) $4.2 \div 100$ (h) $0.54 \div 100$
(i) $521.3 \div 1000$ (j) $0.8 \div 1000$ (k) $1.004 \div 1000$ (l) $9 \div 1000$

2. The length of 100 pieces of railway track is 412.6 metres long.

- (a) What is the length of each piece in metres ?
(b) Change your answer to centimetres.



3. There are 1000 squibiis in a martian pound.
How many martian pounds in :-

- (a) 3497 squibiis (b) 214.6 squibiis
(c) 21977 squibiis (d) 1 squibii ?



Exercise 7

1. Write down the answers to the following :-

- (a)
$$\begin{array}{r} 4.34 \\ \times 4 \\ \hline \end{array}$$
 (b)
$$\begin{array}{r} 8.27 \\ \times 7 \\ \hline \end{array}$$
 (c)
$$\begin{array}{r} 8.78 \\ \times 6 \\ \hline \end{array}$$
 (d)
$$\begin{array}{r} 119.38 \\ \times 9 \\ \hline \end{array}$$

(e) 5.7×8 (f) 42.3×4 (g) 135.9×5 (h) 7×37.521

2. Show all your working to the following questions :-

(a) Fred the monkey eats 3.74 kg of food every day.
What is the weight of food Fred will eat in :-

- (i) 3 days (ii) a week ?

(b) Boris the zookeeper gets paid £7.84 an hour.

How much will Boris earn in :-

- (i) 4 hours (ii) 9 hours ?

(c) Kevin the Camel eats six 3.71 kg boxes of dates every month.
Karen the Camel eats five 4.09 kg boxes.

Who eats the most and by how much ?



Decimals

Exercise 8

1. Copy and complete the following :-

(a) $2 \overline{)37.16}$

(b) $6 \overline{)91.44}$

(c) $7 \overline{)41.79}$

(d) $8 \overline{)129.12}$

2. Find :-

(a) $35.7 \div 7$

(b) $57.06 \div 6$

(c) $0.072 \div 8$

3. Show all your working for the following questions :-

(a) Nine bricks have a total length of 2.61 metres long.

What is the length of 1 brick ?



(b) Three kegs of beer hold 3071.6 litres.

How much beer does one keg hold ?



(c) Find :-

(i) a third of 20.8

(ii) a ninth of 51.66

(iii) a sixth of 6.06

(iv) a fifth of 0.7

4. Two shops sell identical shirts.

Shop A sells three shirts for £8.79.

Shop B sells five shirts for £14.75.

Which shop has the best deal ? Explain.



Exercise 9

You may use a calculator for this exercise but show all working.

1. Shreek the ogre has eight worm lollies each 7.8 cm in length.

What is the total length of all the lollies ?



2. Ben has a 5 litre jug.

0.32 litres, 1.056 litres and 1.9 litres poured into it.

How much more will the jug hold ?



3.



Senji buys six comics at £2.49 each.

How much change will he get from a £20 note ?

4. Marilyn buys eight concert tickets for £182.

How much was it for each ticket ?



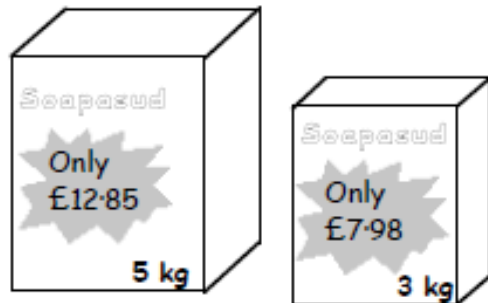
Decimals

5. Mr. Jones borrows £2500 for a family holiday.
He promises to make equal payments every
4 months for 2 years.

How much is each payment ?

6. A large box of Soapasud costs £12.85.
A small box costs £7.98.

Which is the best value ?
Explain your answer.



Revision Exercise

1. What does the zero stand for in each number :-

(a) 5.07 (b) 111.901 (c) 0.9815 (d) 5.1904

2. Which numbers are the arrows pointing to :-



3. Round to one decimal place :-

(a) 0.849 (b) 5.7911 (c) 99.501 (d) $10 \div 6$

4. Do the following mentally and write down the answer :-

(a) $21.72 + 5.48$ (b) $6 - 4.67$ (c) 2.63×5 (d) $5.964 \div 7$
(e) 0.61×10 (f) 7.821×100 (g) 1000×0.3247 (h) 4.32×200

5. A 5 metre length of cable is cut into 3 strips.

The first strip was 3.42 m.
The second strip was 0.75 m.

How long was the third strip.



6. Use a calculator and then round to one decimal place.

(a) A barrel holds 140.6 litres of water. How much would 17 barrels hold ?
(b) Thirteen railway cars have total length 164.2 metres. What is the length of one
(c) A field with area 1875 metres is fenced into four equal section.
What is the area of each section ?
(d) Twenty sweets cost £1. How much for fifty sweets ?



Answers

Chapter 2 Exercise 5

1. a 84 b 98 c 76.2 d 187.1
e 641 f 9.1 g 402.1 h 0.54
i 5213 j 876.5 k 1004.1 l 4200
2. a 476.2 kg b 4762 kg
c 47620 kg d 476200 kg
3. a 5000 b 7620 c 41.5 d 10

Chapter 2 Exercise 6

1. a 2.86 b 1.98 c 0.762 d 18.71
e 0.641 f 0.1091 g 0.042 h 0.0054
i 0.5213 j 0.0008 k 0.001004 l 0.009
2. a 4.126 m b 412.6 cm
3. a 3.497 b 0.2146 c 21.977 d 0.001

Chapter 2 Exercise 7

1. a 17.36 b 57.89 c 52.68 d 1074.42
e 45.6 f 169.2 g 679.5 h 262.647
2. a (i) 11.22 kg (ii) 26.18 kg
b (i) £31.36 (ii) £70.56
c Kevin by 1.81 kg

Chapter 2 Exercise 8

1. a 18.58 b 15.24 c 5.97 d 16.14
2. a 5.1 b 9.51 c 0.009
3. a 0.29 m b 1024.2 l
c (i) 6.6 (ii) 5.74 (iii) 1.01 (iv) 0.14
4. shop A each shirt 2p cheaper

Chapter 2 Exercise 9

1. 62.4 cm 2. 1.724 l 3. £5.06 4. £22.75
5. £400 6. 5 kg box – 9p/kg cheaper

Chapter 2 Revision Exercise

1. a tenths b hundredths
c whole d thousands
2. a 7.7 b 2.92

Rounding

Exercise 1

Decimal Places & Rounding



- Round each of the following to **one** decimal place :-
 - 8.63
 - 3.77
 - 9.051
 - 2.949
 - 11.123
 - 54.96
 - 0.0612
 - 99.97.
- Round each of the following to **two** decimal places :-
 - 1.768
 - 12.125
 - 7.706
 - 9.0052
 - 3.04399
 - 0.01517
 - 99.987
 - 99.999.
- Round each of these numbers to the number of decimal places in the brackets :-
 - 7.845 (2)
 - 3.1903 (1)
 - 51.542 (2)
 - 5.87654 (3).
- Share £8000 equally between 6 people.
How much can each person get ?
 - Share one million pounds equally between 9 people.
How much can each person get ?
 - How much will each person get if you share $£10\frac{1}{4}$ million between 7 people ?
- Find three places in real life where rounding to decimal places is used.



Answers

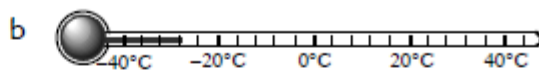
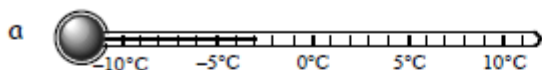
Exercise 1 - Decimal Places

- | | | | | | | | |
|---|------|---|------|---|-----|---|-------|
| a | 8.6 | b | 3.8 | c | 9.1 | d | 2.9 |
| e | 11.1 | f | 55.0 | g | 0.1 | h | 100.0 |
- | | | | | | | | |
|---|------|---|-------|---|-------|---|--------|
| a | 1.77 | b | 12.13 | e | 7.71 | d | 9.01 |
| e | 3.04 | f | 0.02 | g | 99.99 | h | 100.00 |
- | | | | | | | | |
|---|------|---|-----|---|-------|---|-------|
| a | 7.85 | b | 3.2 | c | 51.54 | d | 5.877 |
|---|------|---|-----|---|-------|---|-------|
- | | | | |
|---|-------------|---|------------|
| a | £1333.33 | b | £111111.11 |
| c | £1464285.71 | | |
- Various

Integers

Exercise 9.3

1. Write down the temperature shown on each thermometer :-



2. a The temperature last night dropped from 3°C to -5°C .

By how many degrees did the temperature drop ?

- b Two hours ago the temperature read -1°C .

The temperature has risen by 8°C .

What is the new temperature ?



3. a My bank balance showed $-\text{£}35$. I withdrew $\text{£}25$. How much does my account now show ?

- b Ed's account shows $(-\text{£}3550)$. He deposits $\text{£}1650$. What does his account show now ?

4. Which integer is **halfway** between :-

a -12 and 14

b -11 and 13

c -111 and 113 .

Exercise 9.4

1. Write down the temperature that is :-

a 8°C down from 2°C

b 5°C up from -3°C

c 18°C down from -11°C .

2. 4°C is 6°C up from -2°C . Copy and complete :-

a 3°C is from -3°C

b 5°C is from -1°C

c -11°C is from -20°C

d -23°C is from -57°C .

3. A chemical freezing unit starts at -3°C and drops 8°C every hour.

What is the temperature after :-

a 3 hours

b 5 hours

c 8.5 hours ?

Integers

Exercise 9.5

1. Find :-

a $2 + (-1)$

d $(-1) + 3$

g $15 - 23$

j $(-3) - 1$

m $(-5) + (-5)$

p $(-2) + 4 - 6$

b $5 + (-4)$

e $(-3) + 6$

h $37 - 58$

k $(-12) - 5$

n $(-8) + (-3)$

q $(-1) + 1 + (-1)$

c $8 + (-3)$

f $(-9) + 3$

i $123 - 141$

l $(-56) - 23$

o $(-134) + (-156)$

r $(-23) + (-12) - 17$.

Exercise 9.6

1. Copy and complete :-

$$\begin{aligned} \text{a } 4 - (-2) \\ &= 4 + 2 \\ &= \dots \end{aligned}$$

$$\begin{aligned} \text{b } -3 - (-2) \\ &= -3 + 2 \\ &= \dots \end{aligned}$$

2. Find :-

a $3 - (-4)$

d $(-2) - (-1)$

g $(-23) - (-34)$

b $5 - (-7)$

e $(-6) - (-3)$

h $(-123) - (-234)$

c $12 - (-12)$

f $(-11) - (-12)$

i $(-100) - (-100) - 100$.

3. Find :-

a $(-1 \cdot 4) - (-2 \cdot 3)$

b $(-5 \cdot 7) - (-6 \cdot 8)$.

Exercise 9.7

1. Find :-

a $3 \times (-1)$

d $(-6) \times 3$

g $16 \div (-2)$

j $(-60) \div 6$

m $(-3) \times 2 \times 5$

b $5 \times (-3)$

e $(-5) \times 4$

h $24 \div (-3)$

k $(-124) \div 4$

n $3 \times (-1) \times 2$

c $8 \times (-8)$

f $(-7) \times 4$

i $45 \div (-5)$

l $(-312) \div 3$

o $6 \times 3 \times (-2)$.

Exercise 9.8

1. Find :-

a $(-2) \times (-3)$

d $(-3) \times (-3)$

g $(-12) \div (-4)$

j $(-23) \times (-30)$

b $(-5) \times (-3)$

e $(-7) \times (-6)$

h $(-15) \div (-5)$

k $(-250) \div (-50)$

c $(-8) \times (-1)$

f $(-9) \times (-9)$

i $(-100) \div (-20)$

l $(-12) \times (-3) \div 4$.

Answers

Exercise 9.3

1. a -3°C b -28°C
2. a 8°C b 7°C
3. a $-\text{£}60$ b $-\text{£}1900$
4. a 1 b 1 c 1

Exercise 9.4

1. a -6°C b 2°C c -29°C
2. a 6°C up b 6°C down c 9°C up d 34°C down
3. a -27°C b -43°C c -71°C

Exercise 9.5

1. a 1 b 1 c 5 d 2
 e 3 f -6 g -8 h -21
 i -18 j -4 k -17 l -79
 m -10 n -11 o -290 p -4
 q -1 r -52

Exercise 9.6

1. a 6 b -1
2. a 7 b 12 c 24 d -1
 e -3 f 1 g 11 h 111
 i -100
3. a 0.9 b 1.1

Exercise 9.7

1. a -3 b -15 c -64 d -18
 e -20 f -28 g -8 h -8
 i -9 j -10 k -31 l -104
 m -30 n -6 o -36

Exercise 9.8

1. a 6 b 15 c 8 d 9
 e 42 f 81 g 3 h 3
 i 5 j 690 k 5 l 9

Algebra

Exercise 1

Simplifying

1. Simplify each expression by collecting like terms :-

a $y + y + y$ b $t + 3t - 2t$ c $3p + 5p + p$ d $4k + 9k - 4k$

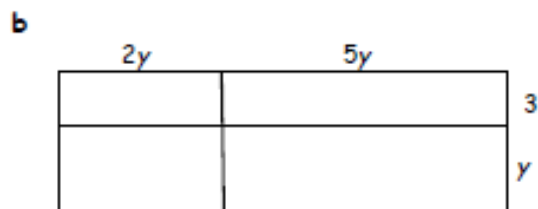
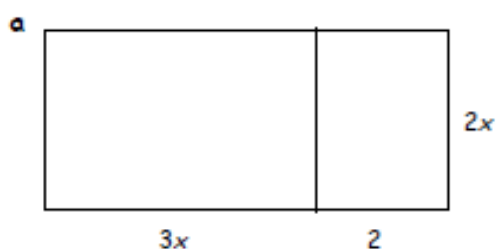
e $2w + 6w + 3$ f $7u + 3 - 6u$ g $8y + 4b + 3y - 2b + 7$

h $3 \times 4y$ i $6k \times 7$ j $16p \div 2$ k $24w \div 8$

l $a \times 3b$ m $2v \times 3v$ n $2ab \times 3a$ o $3cd \times 4c \times 2d$

p $18p \div 3p$ q $6k^2 \div 3k$ r $40g^2 \div 8g^2$ s $4t \times 6t \div 8t$.

2. Find the total area of each **large** rectangle in terms of x and y :-



Answers

Exercise 1 - Simplifying

- | | | | | | | | |
|---|--------|---|--------|---|------------|---|------------|
| a | $3y$ | b | $2t$ | c | $9p$ | d | $9k$ |
| e | $8w+3$ | f | $u+3$ | g | $11y+2b+7$ | | |
| h | $12y$ | i | $42k$ | j | $8p$ | k | $3w$ |
| l | $3ab$ | m | $6v^2$ | n | $6a^2b$ | o | $24c^2d^2$ |
| p | 6 | q | $2k$ | r | 5 | s | $3t$ |
- | | | | |
|---|-------------|---|--------------|
| a | $6x^2 + 3x$ | b | $7y^2 + 21y$ |
|---|-------------|---|--------------|