



S1 Block 1

Revision Booklet

Topics

Place Value

Whole Numbers

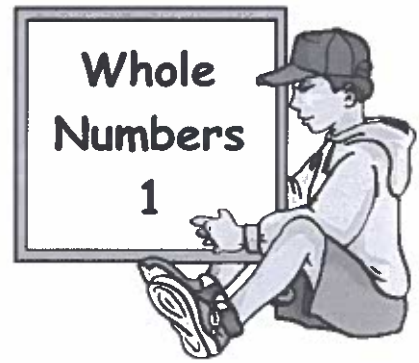
Decimals

Fractions

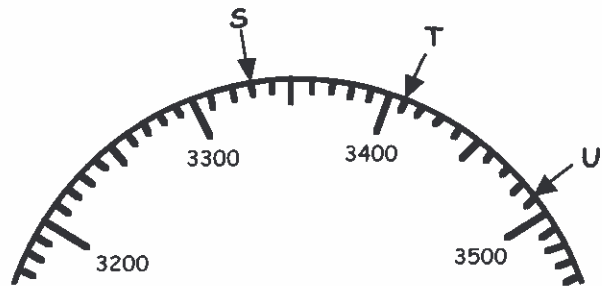
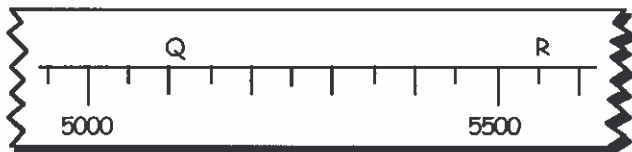
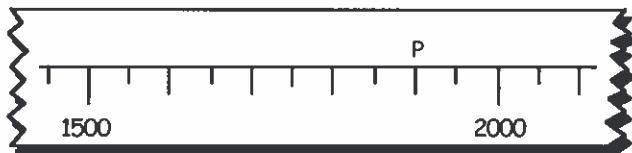
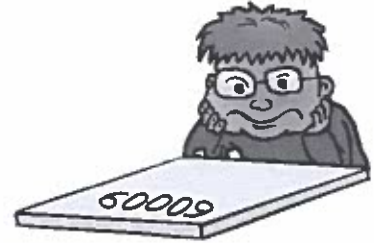
Percentages

CHAPTER 1

Exercise 1



- What do the following **digits** stand for in the number 23986 :-
a 8 b 3 c 9 d 2 ?
- What does the 7 stand for in each of these numbers :-
a 6705 b 3971 c 7596 d 1837 ?
- Write out the following numbers fully in **words** :-
a 3960 b 35053 c 70406 d 90003.
- Write the following numbers **using digits** :-
a sixty thousand and nine
b forty thousand four hundred and twenty seven
c two hundred thousand and two.
- Put the following set of numbers in order, **smallest first** :-
5186, 5281, 5090, 5195, 5210, 5341, 5290, 5199.
- Write down the number that is :-
a 10 after 490 b 300 before 6570 c 3000 before 7200
d 2500 after 6500 e 4000 before 9180 f 5800 before 9200.
- Look at the following scales. What numbers are represented by P, Q, R, ... ?



- What number lies **halfway** between :-
a 650 and 660 b 8100 and 8500 c 7800 and 8200 ?

Exercise 2

1. Write down the answers to :-

- a $39 + 46$ b $75 + 65$ c $89 + 74$ d $370 + 290$
 e $630 + 880$ f $7500 + 5700$ g $8920 + 1080$ h $2967 + 6859$.

2. Write down the answers to :-

- a $73 - 42$ b $92 - 27$ c $100 - 56$ d $340 - 69$
 e $420 - 190$ f $810 - 380$ g $5500 - 4700$ h $10\ 000 - 3600$.

3. Find :-

- a $6560 + 1800$ b $7830 - 4950$ c $2638 + 6775$ d $8760 - 7980$.

4. Charles got an annual bonus of £859, but Carole's bonus was £1420.

- a How much did their bonuses come to **altogether** ?
 b How much **less** did Charles get than Carole ?



5.



Florence has a cheque for £2500.
 She intends to pay £1720 into her bank and use what's left to buy an HD Ready TV.

How much is the TV to cost ?

Exercise 3

1. Copy the following and find the answers :-

- | | | | |
|---|---|--|--|
| a $\begin{array}{r} 396 \\ + 174 \\ \hline \end{array}$ | b $\begin{array}{r} 798 \\ + 416 \\ \hline \end{array}$ | c $\begin{array}{r} 727 \\ - 486 \\ \hline \end{array}$ | d $\begin{array}{r} 812 \\ - 395 \\ \hline \end{array}$ |
| e $\begin{array}{r} 4009 \\ + 5098 \\ \hline \end{array}$ | f $\begin{array}{r} 8376 \\ - 5986 \\ \hline \end{array}$ | g $\begin{array}{r} 6213 \\ - 798 \\ \hline \end{array}$ | h $\begin{array}{r} 10\ 000 \\ - 6107 \\ \hline \end{array}$ |
| i $3456 + 7777$ | j $9000 - 285$ | k $4902 + 2298$ | l $10\ 000 - 8471$. |

2. a Every Tuesday Ryanjet fly from Glasgow to Portugal, a distance of 2097 km and from there a further 6068 km to Dubai.

How far does the plane fly **in total** on a Tuesday ?



b



Sadiq the doorman earned £3470 in tips last year.
 This year his tips **dropped** by £590.

How much did he earn in tips this year ?

Exercise 4

1. Round to the nearest 10 :-

- | | | | |
|-------|-------|--------|-----------|
| a 72 | b 58 | c 6 | d 482 |
| e 307 | f 705 | g 4834 | h 14 299. |

2. Round to the nearest 100 :-

- | | | | |
|--------|----------|----------|-----------|
| a 473 | b 849 | c 3091 | d 7949 |
| e 7951 | f 38 270 | g 42 726 | h 81 999. |

3.



A motorbike is on sale at the local dealer's for £2364.

Round this amount to the nearest :-

- a £10 b £100.

4. The attendance figures at two Seria A Italian football matches last Sunday were 38 482 and 29 215.

Round both figures to the nearest :-

- a 10 b 100.



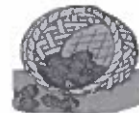
Exercise 5

1. Round each number to 1 figure accuracy, then, mentally, give an *estimate* to :-

- | | | | |
|---------------|---------------|----------------|------------------|
| a $19 + 51$ | b $73 - 48$ | c $81 - 18$ | d $385 + 549$ |
| e $608 - 275$ | f $780 - 567$ | g $2722 + 218$ | h $5533 - 847$. |

2. a Josie has 291 apples in his basket, Jenny has only 96.

Approximately, how many do they have in total ?



b Bobby paid £223 for a car service. Brian paid £377.

Approximately, what was the total for the two services ?



3. Give an approximate answer to each of the following :-

- | | | | |
|-------------|--------------|---------------|-----------------|
| a $77 - 26$ | b $518 - 98$ | c $915 - 452$ | d $784 - 249$. |
|-------------|--------------|---------------|-----------------|

4. Round each number to 1 figure accuracy, then give an *estimate* to :-

- | | | | |
|------------------|---------------------|--------------------|-----------------------|
| a $57 + 31 + 28$ | b $686 + 337 - 678$ | c $996 - 549 - 97$ | d $814 + 307 - 739$. |
|------------------|---------------------|--------------------|-----------------------|

5. a Of the 999 peppers delivered to a supermarket, 428 of them were green.

Approximately how many were not green ?



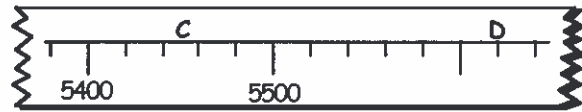
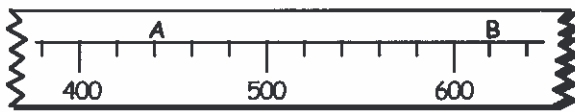
b What is $188 + 388 + 588 + 788$ approximately equal to ?

Revision Exercise



1. Write out the number 76 408 fully in words.
2. Write these numbers using digits :-
 - a twenty three thousand four hundred and two
 - b seventy nine thousand and seventeen.
3. Rearrange the numbers given below in order, starting with the **smallest**.
57029 69080 69101 58792 70089 68090.

4. a What numbers are represented by A, B, C and D on the given scales ?



- b What is the reading on this thermometer ?



5. What number lies **halfway** between :-

a 3100 and 3500

b 37000 and 45000 ?

6. Work out these :-

a $147 + 329$

b $2500 + 3900$

c $1700 - 970$

d $3000 - 72$.

7. Set down the following and show your working :-

a
$$\begin{array}{r} 5271 \\ + 2984 \\ \hline \end{array}$$

b
$$\begin{array}{r} 6914 \\ - 1744 \\ \hline \end{array}$$

c $3987 + 886$

d $60000 - 9872$.

8. Try this question **mentally** :-

A train leaves Glasgow with 110 passengers.

At Cardonald, 30 people get off and 5 people get on.

At Paisley, 25 people get off and 39 people get on.

How many passengers are on the train as it leaves Paisley ?



9. Round to the nearest 10 :- a 56 b 483 c 4997.

10. Round to the nearest 100 :- a 629 b 7851 c 38 361.

11. Round to 1 figure accuracy and find an **approximate** answer for the following :-

a $73 + 37$

b $812 - 394$

c $5967 + 2188$

d $9304 - 1418$.

Answers to Chapter 1

Exercise 1

- a 8 tens b 3 thousands c 9 hundreds
d 20 thousands
- a 700 b 70 c 7000 d 7 units
- a three thousand nine hundred and sixty
b thirty five thousand and fifty three
c seventy thousand four hundred and six
d ninety thousand and three
- a 60009 b 40427 c 200002
- 5090 5186 5195 5199 5210 5281 5290 5341
- a 500 b 6270 c 4200
d 9000 e 5180 f 3400
- P 1900 Q 5100 R 5550 S 3330
T 3410 U 3490
- a 655 b 8300 c 8000

Exercise 2

- a 85 b 140 c 163 d 660
e 1510 f 13200 g 10000 h 9826
- a 31 b 65 c 44 d 271
e 230 f 430 g 800 h 6400
- a 8360 b 2880 c 9413 d 780
- a £2279 b £561
- £780

Exercise 3

- a 570 b 1214 c 241 d 417
e 9107 f 2390 g 5415 h 3893
i 11233 j 8715 k 7200 l 1529
- a 8165 km b £2880

Exercise 4

- a 70 b 60 c 10 d 480
e 310 f 710 g 4830 h 14300
- a 500 b 800 c 3100 d 7900
e 8000 f 38300 g 42700 h 82000
- a £2360 b £2400
- a 38480 b 29220 c 38500 d 29200

Exercise 5

- a 70 b 20 c 60 d 900
e 300 f 200 g 3200 h 5000
- a 400 b £600
- a 40 b 400 c 400 d 600
- a 120 b 300 c 400 d 400
- a 600 b 2000

Revision Exercise

- Seventy six thousand four hundred and eight
- a 23402 b 79017
- 57029 58792 68090 69080 69101 70089
- a A 440 B 620 C 5450 D 5620

b 26°C

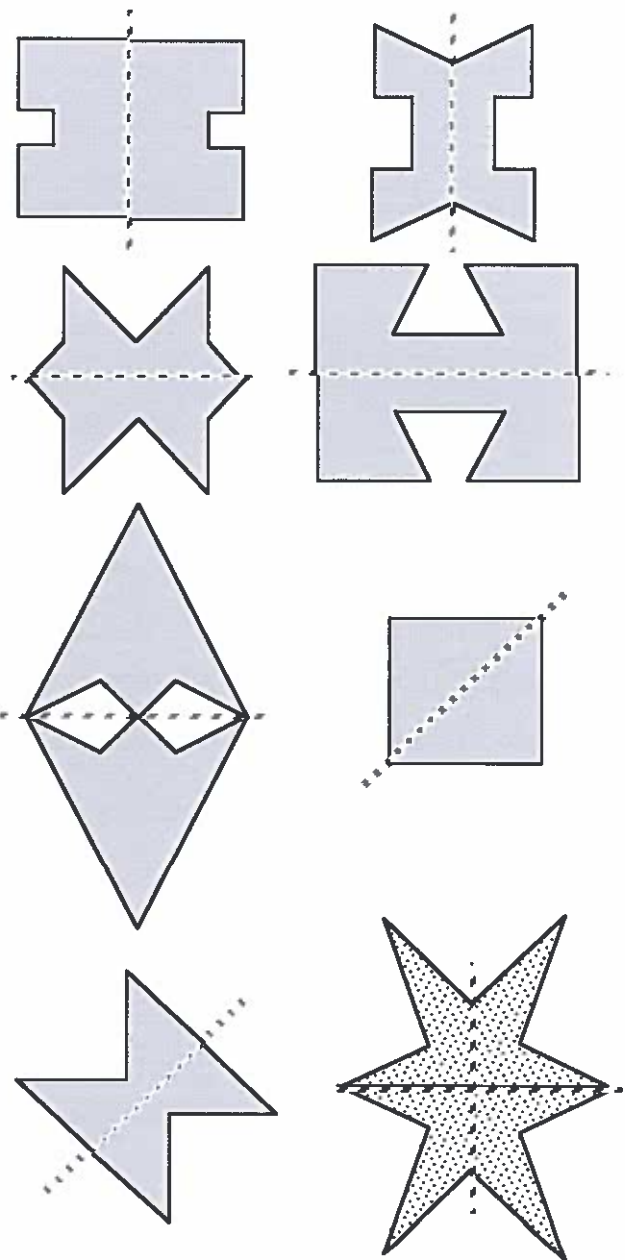
- a 3300 b 41000
- a 476 b 6400 c 730 d 2928
- a 8255 b 5170 c 4873 d 50128
- 99
- a 60 b 480 c 5000
- a 600 b 7900 c 38400
- a 110 b 400 c 8000 d 8000.

Answers to Chapter 2

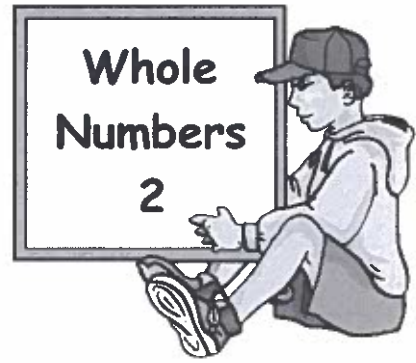
Exercise 1

- a 4 b 2 c 1 d 5
e 1 f 0 g 1 h 0
i 0 j 1 k 2 l 3
- Check Drawings

Exercise 2



CHAPTER 3



Exercise 1

1. Copy the following and complete the calculations :-

$$\begin{array}{r} \text{a} \quad 238 \\ \times 3 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{b} \quad 97 \\ \times 4 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{c} \quad 496 \\ \times 5 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{d} \quad 185 \\ \times 6 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{e} \quad 1274 \\ \times 7 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{f} \quad 4521 \\ \times 8 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{g} \quad 2987 \\ \times 9 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{h} \quad 46208 \\ \times 7 \\ \hline \\ \hline \end{array}$$

2. Rewrite each of these in the above form and complete the calculations :-

$$\text{a} \quad 54 \times 8$$

$$\text{b} \quad 189 \times 7$$

$$\text{c} \quad 6 \times 107$$

$$\text{d} \quad 95 \times 5$$

$$\text{e} \quad 8 \times 1234$$

$$\text{f} \quad 7 \times 4260$$

$$\text{g} \quad 16508 \times 9$$

$$\text{h} \quad 37529 \times 4$$

3. Show your working in answering the following questions :-

a Jemma pays £95 each month for her cable TV, phone and internet.
How much will she have paid after 9 months?



b



Peter earns £24790 per year as a landscaper.
How much will he earn over 4 years?

4. a A palette holds 1085 jars of gherkins.
How many jars are there altogether on 7 palettes?



b Find the value of :- (i) $4 \times 7 \times 75$ (ii) $8 \times 697 \times 5$.

Exercise 2

1. Copy the following and complete each calculation :-

$$\text{a} \quad 7 \overline{)56}$$

$$\text{b} \quad 5 \overline{)715}$$

$$\text{c} \quad 6 \overline{)774}$$

$$\text{d} \quad 8 \overline{)632}$$

$$\text{e} \quad 6 \overline{)6582}$$

$$\text{f} \quad 4 \overline{)7428}$$

$$\text{g} \quad 7 \overline{)89922}$$

$$\text{h} \quad 9 \overline{)88047}$$

2. Set the following down in the same way as in Qu 1 and complete each calculation :-

a $108 \div 6$ b $876 \div 2$ c $828 \div 3$ d $882 \div 9$

e $959 \div 7$ f $8165 \div 5$ g $9436 \div 4$ h $8538 \div 3$.

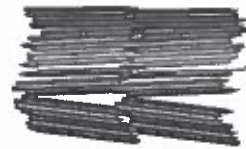
3. Find the remainder in these questions :-

a $2 \overline{)3187}$ b $3 \overline{)9725}$ c $4 \overline{)16v301}$ d $5 \overline{)77084}$

e $919 \div 6$ f $4183 \div 7$ g $\frac{1938}{8}$ h $\frac{7516}{9}$.

4. 1080 coloured pencils are packed into 9 boxes.

How many pencils are in each box ?



5.  3147 limes are placed equally into 6 baskets.

How many are in each basket and how many are left over ?

6. Without using a calculator, find a way of dividing 1344 by 32 and state your answer.

Exercise 3

1. Write down the answers to the following :-

a 19×10 b 73×10 c 99×10 d 10×123
e 10×906 f 4070×10 g 10×9762 h 10×76130 .

2. Write down the answers to the following :-

a 37×100 b 98×100 c 100×186 d 100×800
e 3090×100 f 100×7001 g 100×5900 h 60400×100 .

3. Write down the answers to these :-

a 19×1000 b 429×1000 c 490×1000 d 1000×530
e 1000×600 f 4680×1000 g 1000×4700 h 1000×62070 .

4. A box contains 100 Mojos. How many Mojos are there in :-

a 25 boxes b 100 boxes c 420 boxes ?



5. There are 1000 metres in 1 kilometre. How many metres make up :-

a 7 km b 41 km c 380 km d 6009 km ?

Exercise 4



1. Write down the answers to the following :-

- a $410 \div 10$ b $980 \div 10$ c $2450 \div 10$ d $7300 \div 10$
 e $60\,400 \div 10$ f $127\,000 \div 10$ g $100\,000 \div 10$ h $4\,070\,500 \div 10$.

2. Write down the answers to these :-

- a $400 \div 100$ b $2700 \div 100$ c $8600 \div 100$ d $34\,000 \div 100$
 e $7000 \div 100$ f $109\,000 \div 100$ g $70\,000 \div 100$ h $2\,900\,000 \div 100$.

3. Write down the answers to :-

- a $5000 \div 1000$ b $57\,000 \div 1000$ c $93\,000 \div 1000$ d $20\,000 \div 1000$
 e $639\,000 \div 1000$ f $870\,000 \div 1000$ g $400\,000 \div 1000$ h $5\,100\,000 \div 1000$.

4. There are 100 pence in 1 pound. How many pounds are equal to :-

- a 1400p b 65 000p c 490 000p ?



5. A hive is built to take a maximum of 1000 bees. How many hives are need for :-


- a 17 000 bees b 38 000 bees c 250 000 bees d six million bees ?

Exercise 5



1. Calculate :-

- a $189 + 75$ b $518 + 427$ c $3795 + 1925$ d $7482 + 3828$
 e $207 - 28$ f $454 - 289$ g $7507 - 2718$ h $9576 - 7885$
 i 98×17 j 56×49 k 185×297 l 32×703
 m $4655 \div 19$ n $7223 \div 31$ o $17\,304 \div 56$ p $510 \times 18 \div 12$.

2. a  One carton has 825 ml of liquid in it, the other has 489 ml.
 What's the difference in volumes ?

b Bert paid £1856 to upgrade his conservatory windows and £1689 to renew the roof.

How much did this cost him in total ?



c  Cospo's have 15 vacuum cleaners for sale at £175 each.

If they sell them all, how much money will they have taken in ?

cont'd

- d This vending machine can hold 24 bars of chocolate.
How many machines can be filled from 1395 bars of chocolate and how many bars will be left over ?



Revision Exercise

1. Find :-

a
$$\begin{array}{r} 82 \\ \times 4 \\ \hline \end{array}$$

b
$$\begin{array}{r} 8257 \\ \times 8 \\ \hline \end{array}$$

c 607×9

d 6×4235 .

2. Copy the following and complete :-

a $7 \overline{)413}$

b $7185 \div 5$

c $\frac{7314}{6}$

d $2574 \div 9$.

3. Do the following **mentally** :-

a 38×10

b 10×4270

c 501×100

d 100×700

e $6400 \div 10$

f $4000 \div 10$


g $85000 \div 100$

h $9000 \div 1000$.

4. Attempt these problems, **showing all working** :-


- a A ship carried 2276 passengers from Greenock to Barcelona. On the return journey there were 1948 passengers.
What was the total number of passengers on both trips ?



- b  A music shop orders in pianos at £2785 each.
How much did it cost for 6 pianos ?

- c This photocopier runs off 4285 copies over a five day week.
How many copies does that average out at per day ?



- d  When buying a new £9250 car, Jean accepted £3186 for her old one.
How much money did Jean have to pay the garage ?

5. Do the following :-

a $172 \times 7 \times 8$

b $2052 \div 9 \div 4$.

6. Put the correct sign (+, -, x, ÷) into these calculations to make them correct :-

a $78 \dots 78 = 1$

b $65 \dots 65 = 130$

c $83 \dots 83 = 0$

d $19 \dots 19 = 361$.

Answers to Chapter 3

Exercise 1

1. a 714 b 388 c 2480 d 1110
 e 8918 f 36168 g 26883 h 323456
2. a 432 b 1323 c 642 d 475
 e 9872 f 29820 g 148572 h 150116
3. a £855 b £99160
4. a 7595 b i 2100 c ii 27880

Exercise 2

1. a 8 b 143 c 129 d 79
 e 1097 f 1857 g 12846 h 9783
2. a 18 b 438 c 276 d 98
 e 137 f 1633 g 2359 h 2846
3. a R1 b R2 c R1 d R4
 e R1 f R4 g R2 h R1
4. 120
5. 524 3 left over
6. 42 ($2 \div 2 \div 2 \div 2 \div 2$)

Exercise 3

1. a 190 b 730 c 990 d 1230
 e 9060 f 40700 g 97620 h 761300
2. a 3700 b 9800 c 18600 d 80000
 e 309000 f 700100 g 590000 h 6040000
3. a 19000 b 429000
 c 490000 d 530000
 e 600000 f 4680000
 g 4700000 h 62070000
4. a 2500 b 10000 c 42000
5. a 7000 b 41000 c 380000 d 6009000

Exercise 4

1. a 41 b 98 c 245 d 730
 e 6040 f 12700 g 10000 h 407050
2. a 4 b 27 c 86 d 340
 e 70 f 1090 g 700 h 29000
3. a 5 b 57 c 93 d 20
 e 639 f 870 g 400 h 5100
4. a £14 b £650 c £4900
5. a 17 b 38 c 250 d 6000

Exercise 5

1. a 264 b 945 c 5720 d 11310
 e 179 f 165 g 4789 h 1691
 i 1666 j 2744 k 54945 l 22496
 m 245 n 233 o 309 p 765
2. a 336 ml b £3545 c £2625 d 58(3 left)

Revision Exercise

1. a 328 b 66056 c 5463 d 25410
2. a 59 b 1437 c 1219 d 286
3. a 380 b 42700 c 50100 d 70000

- e 640 f 400 g 850 h 9
4. a 4224 b £16710 c 857 d £6064
5. a 9632 b 57
6. a \div b + c - d x

Answers to Chapter 4

Exercise 1

1. a 7.30 pm b 8.50 pm c 4.45 pm d 12.25 am
 e 11.49 pm f 6.20 pm g 1.02 am h 9.55 pm
 i Various j Various
2. 10.50 am 2.35 pm

Exercise 2

1. a 0950 b 1900 c 1615 d 0855
 e 2320 f 1055 g 2258 h 0302
 i 0446 j 1718 k 2301 l 1200
2. a 4.30 am b 11.45 am c 3.20 pm d 2.50 pm
 e 12.05 am f 12.09 pm g 1.56 pm h 7.32 pm
 i 5.07 pm j 5.59 am k 11.11 pm l 12 am
3. 2055 0210
4. a 9.48 pm 3.51 am b Holiday Resort Egypt

Exercise 3

1. a 5 hrs b 2 hrs 30 mins
 c 7 hrs 30 mins d 4 hrs 15 mins
 e 1 hr 30 mins f 4 hrs 35 mins
 g 3 hrs 25 mins h 4 hrs 5 mins
2. 6 hrs 10 mins
3. 1330
4. a (i) 1 hr 10 mins (ii) 45 mins
 (iii) 6 hrs 50 mins
- b (i) 3.30 pm (ii) 4.15 pm
5. Doris by 5 mins

Exercise 4

1. 1614
2. 1332
3. 37 mins
4. 14 mins
5. 1614
6. 1033

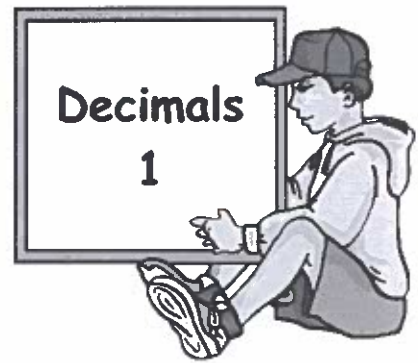
Exercise 5

1. a March b October c July d October
2. a 28 (29) b 31 c 30 d 31
3. a 05/04/13 b 17/06/14
 c 30/11/20
4. a 19 b 13 c 21 d 63

Exercise 6

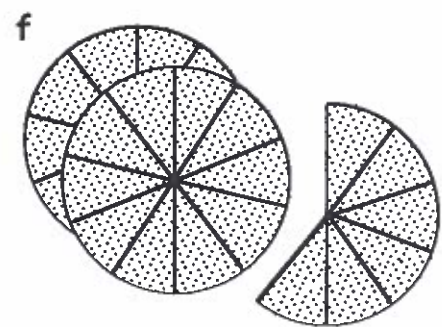
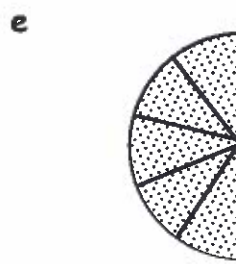
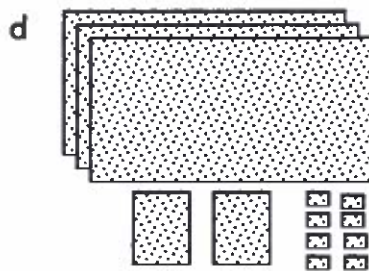
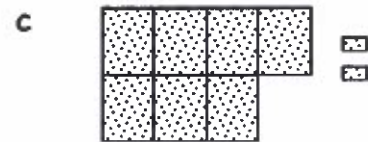
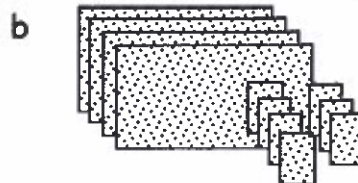
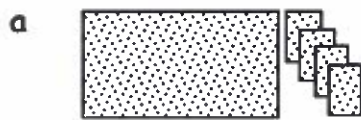
1. a 1 min 10 sec b 2 mins 30 sec
 c 3 mins 20 sec d 5 mins
 e 20 mins 10 sec f 200 mins 5 sec
2. a 1 hr 30 min b 2 hrs 10 min

CHAPTER 5



Exercise 1

1. What decimal numbers do the following diagrams represent ?



2. Draw neat pictures, in the same style as shown above, to represent :-

a 0.6

b 2.2

c 0.47

d 3.74

3. What does the 4 represent in these numbers :-

a 34.72

b 85.14

c 39.45

d 3.064

4. Arrange the following numbers in order, **smallest** first :-

a 0.82, 1.07, 0.09, 0.89, 0.02, 1.03.

b 0.165, 0.201, 0.107, 0.180, 0.166, 0.104, 0.156.

5. What number is :-

a 0.6 up from 1.7

b $\frac{3}{10}$ down from 5.1

c $\frac{7}{100}$ up from 7.38

d $\frac{9}{100}$ down from 4.1

e $\frac{3}{1000}$ up from 2.407

f $\frac{7}{1000}$ down from 1.007

6. What number lies **halfway** between :-

a 0.2 and 0.8

b 3.6 and 3.7

c 6.3 and 6.6

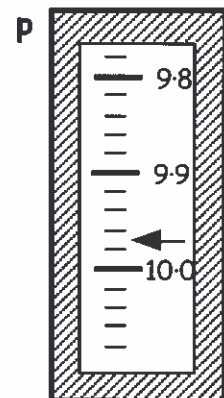
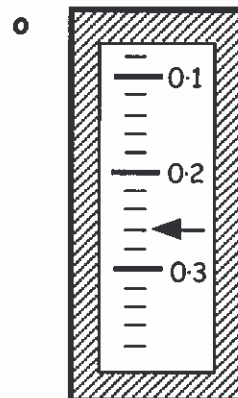
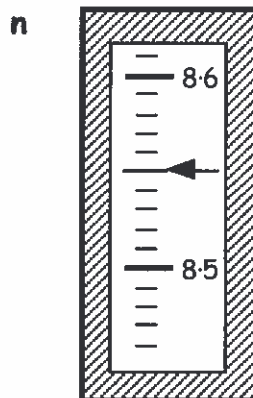
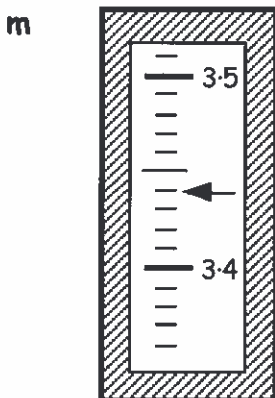
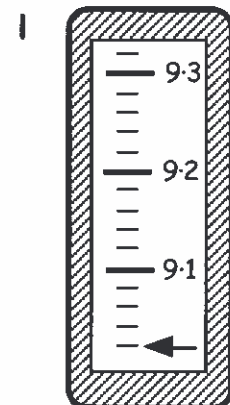
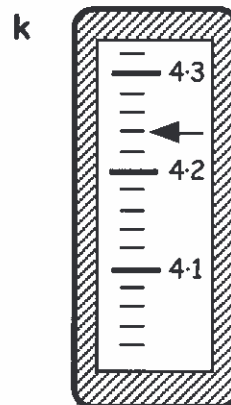
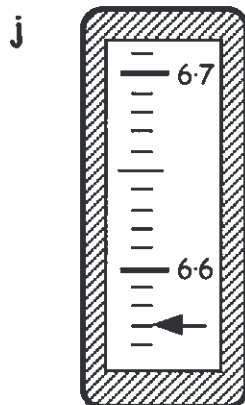
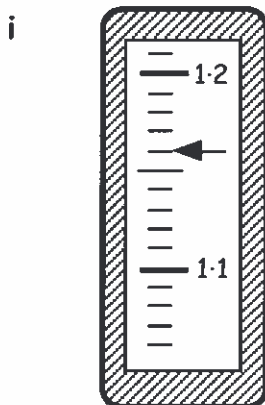
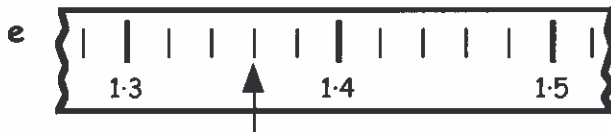
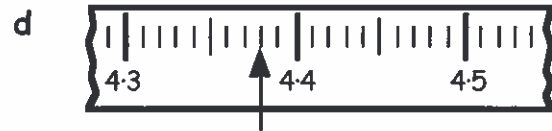
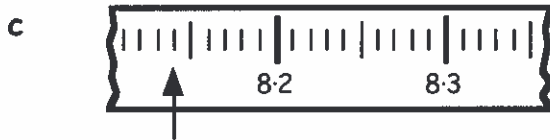
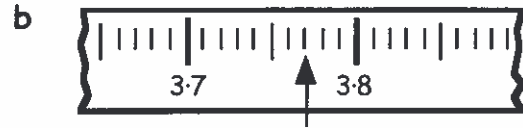
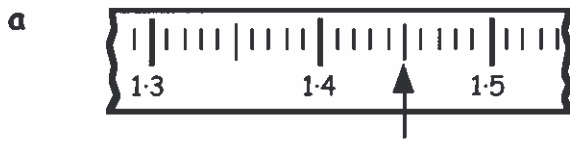
d 0.18 and 0.2

e 2.001 and 2.005

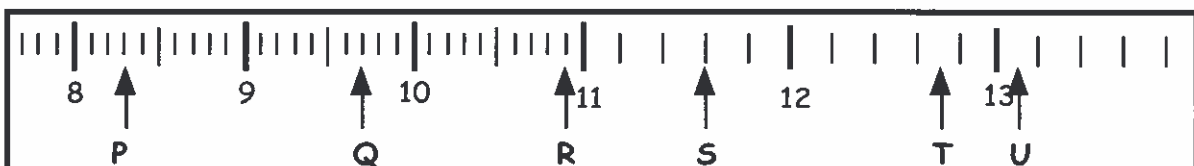
f 1.1 and 1.06

Exercise 2

1. Which decimal numbers are the arrows pointing to?



2. Look at this scale and write what numbers the arrows P, Q, R are pointing to.



Exercise 3

- Round these to the nearest **whole £** :-
 a £8.30 b £7.87 c £1.49 d £103.50.
- Round these measurements to the nearest **whole centimetre** :-
 a 7.6 cm b 5.75 cm c 23.48 cm d 107.50 cm.
- Round these numbers to the nearest **whole number** :-
 a 1.92533 b 19.099988 c 112.50765 d 0.436.
- Use your **calculator** to do the following divisions.
 Write down the answers, correct to the **nearest whole number** :-
 a $65 \div 7$ b $1209 \div 73$ c $153.7 \div 18.1$ d $0.8 \div 0.9$.
 e Seven neighbours shared 1000 plants. How many did they each get?
 f 112 pens are divided equally amongst five girls. How many pens each?



Exercise 4

- Round these numbers to 1 decimal place :-
 a 7.26 b 0.94 c 21.75 d 105.246
 e 4.0561 f 29.05222 g 1.963 h 0.051.
- Use your **calculator** to do the following divisions, then write down your answers correct to 1 decimal place :-
 a $73 \div 15$ b $800 \div 96$ c $61.7 \div 0.82$ d $9.63 \div 10.2$.
- Use your **calculator** to change these fractions to decimals and round your answers to 1 decimal place :-
 a $\frac{5}{7}$ b $\frac{7}{15}$ c $\frac{13}{21}$ d $\frac{15}{19}$.
- Round each number to 1 decimal place, (**no calculator**), then find an estimate to :-
 a $5.289 + 3.617$ b $25.302 + 9.777$ c $8.693 - 6.189$.
- a A piece of rope, 19.3 metres long, is cut into 6 pieces of equal length. What length will each part be (to 1 decimal place)?
 b 9 workers share a lotto win of £29 465.
 How much should each receive, to the nearest 10 pence (1 decimal place)?



Exercise 5

1. Copy the following and find :-

a
$$\begin{array}{r} 3.7 \\ + 4.5 \\ \hline \end{array}$$

b
$$\begin{array}{r} 9.1 \\ - 2.6 \\ \hline \end{array}$$

c
$$\begin{array}{r} 8.49 \\ + 7.38 \\ \hline \end{array}$$

d
$$\begin{array}{r} 10.2 \\ - 8.3 \\ \hline \end{array}$$

e
$$\begin{array}{r} 5.23 \\ + 8.77 \\ \hline \end{array}$$

f
$$\begin{array}{r} 23.12 \\ - 17.51 \\ \hline \end{array}$$

g
$$\begin{array}{r} 23.57 \\ + 37.48 \\ \hline \end{array}$$

h
$$\begin{array}{r} 91.02 \\ - 19.05 \\ \hline \end{array}$$

2. Calculate :-

a $£7.26 + £8.44$

b $£9.72 - £6.89$

c $£64.93 + £36.66$

d $£22.50 - £2.56$

3. One weekend in January, 5.75 cm of snow fell in the Scottish Highlands.

On the same weekend, 13.14 cm of snow fell in the French Alps.

How much more snow fell in the Alps on that weekend ?



4.



In a sale, a skirt cost £23.99 and a blouse cost £19.85.

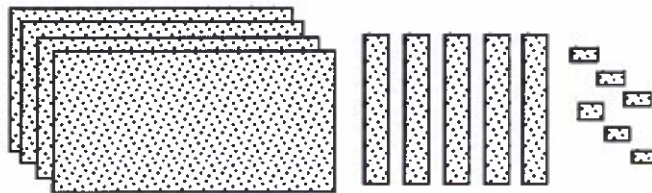
a What's the total cost for both items ?

b How much dearer is the skirt than the blouse ?

Revision Exercise



1. What decimal number is represented by this diagram ?



2. In the decimal number 72.936, what does the :-

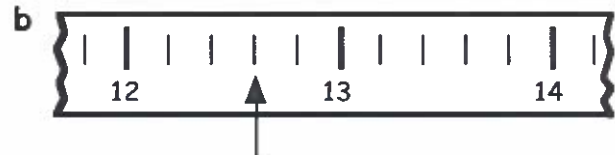
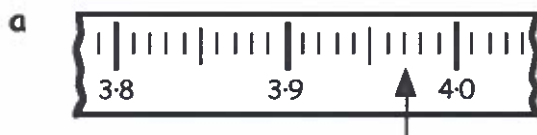
a 7 represent

b 3 represent

c 6 represent

d 9 represent ?

3. What decimal numbers are the arrows pointing to ?



4. Round the following to the nearest whole number :-

- a 8.4 b 12.8 c 62.79 d 102.635.

5. Round each of the following to one decimal place :-

- a 9.87 b 1.63 c 23.55 d 951.249.

6. Copy the following and find :-

- a $\begin{array}{r} 3.69 \\ + 1.76 \\ \hline \end{array}$ b $\begin{array}{r} 46.75 \\ + 9.27 \\ \hline \end{array}$ c $\begin{array}{r} 18.6 \\ - 17.9 \\ \hline \end{array}$ d $\begin{array}{r} 31.24 \\ - 23.83 \\ \hline \end{array}$

- e $£37.95 + £4.58$ f $£72.39 - £43.99$ g $£103.12 - £3.87$.

7. Sheena buys a lamp for £23.99 and 3 bulbs at £1.45 each.
How much change should she receive from £30 ?



8. Mrs Todd bought two trays of plants at £12.89 each and 5 boxes of slug pellets at £0.85 each.



- a How much did it cost her in total ? (*Show all your working*).
- b She handed over a £20 note and six £2 coins.
How much change did she get ?

- c 4 hrs 25 min d 7 hrs
 2. e 30 hrs 30 min f 50 hrs
 3. a 8 mins 35 sec b 8 mins 20 sec
 c 11 mins 30 sec d 4 mins 15 sec
 e 4 mins 15 sec f 50 sec
 4. 10 mins 55 sec

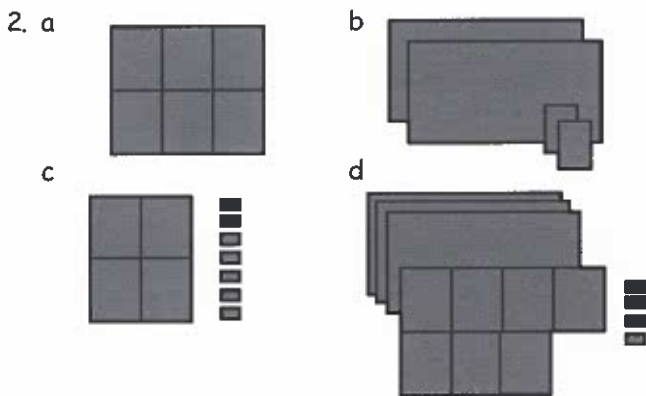
Revision Exercise

1. a 0645 b 1905 c 2132 d 0030
 2. a 7.35 am b 5.40 pm c 10.51 am d 12.53 pm
 3. 5 hrs 40 min 4. 8.30 am
 5. a 22 mins b 50 mins c 1440
 6. a (i) 30 (ii) 31 b 14
 7. a Megan by 25 sec b 13 mins 59 sec
 8. 0310 on Wednesday

Answers to Chapter 5

Exercise 1

1. a 1.4 b 4.7 c 0.72 d 3.28
 e 0.5 f 2.6



3. a units b hundredths
 c tenths d thousandths
 4. a 0.02 0.09 0.82 0.89 1.03 1.07
 b 0.104 0.107 0.156 0.165 0.166 0.180 0.201
 5. a 2.3 b 4.8 c 7.45
 d 4.01 e 2.410 f 1.000
 6. a 0.5 b 3.65 c 6.45
 d 0.19 e 2.003 f 1.08

Exercise 2

1. a 1.45 b 3.77 c 8.14 d 4.38
 e 1.36 f 3.98 g 7.55 h 8.05
 i 1.16 j 6.57 k 4.24 l 9.02
 m 3.44 n 8.55 o 0.26 p 9.97
 2. P 8.3 Q 9.7 R 10.9 S 11.6 T 12.7 U 13.1

Exercise 3

1. a £8 b £8 c £1 d £104
 2. a 8 cm b 6 cm c 23 cm d 108 cm
 3. a 2 b 19 c 113 d 0
 4. a 9 b 17 c 8
 d 1 e 143 f 22

Exercise 4

1. a 7.3 b 0.9 c 21.8 d 105.2
 e 4.1 f 29.1 g 2.0 h 0.1
 2. a 4.9 b 8.3 c 75.2 d 0.9
 3. a 0.7 b 0.5 c 0.6 d 0.8
 4. a 8.9 b 35.1 c 2.5
 5. a 3.2 m b £3273.90

Exercise 5

1. a 8.2 b 6.5 c 15.87 d 1.9
 e 14 f 5.61 g 61.05 h 71.97
 2. a £15.70 b £2.83 c £101.59 d £19.94
 3. 7.39 cm
 4. a £43.84 b £4.14

Revision Exercise

1. 4.56
 2. a tens b hundredths
 c thousandths d tenths
 3. a 3.97 b 12.6
 4. a 8 b 13 c 63 d 103
 5. a 9.9 b 1.6 c 23.6 d 951.2
 6. a 5.45 b 56.02 c 0.7 d 7.41
 e £42.53 f £28.40 g £99.25
 7. £1.66
 8. a £30.03 b £1.97

Answers to Chapter 6

Exercise 1

1. a obtuse b acute c obtuse d right
 e straight f reflex g obtuse h acute
 2. a 85° 19° 70° 34° b 104° 143° 96° 178°
 c 180° d 90° e 207° 318°

Exercise 2

1. a $\angle ATP$ b $\angle BHS$ c $\angle URM$ d $\angle CID$
 2. a $\angle BYR$ right b $\angle CVQ$ acute
 c $\angle THE$ obtuse d $\angle GKH$ reflex
 3. Check Drawing

Exercise 3

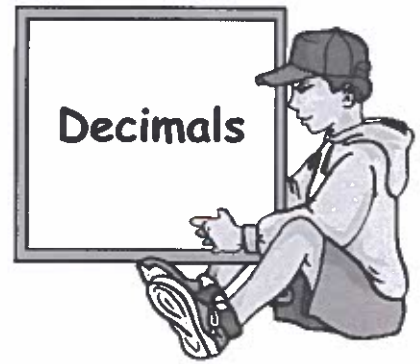
1. a $\angle ANH = 50^\circ$ b $\angle MTY = 140^\circ$
 c $\angle JLP = 75^\circ$ d $\angle CRM = 55^\circ$
 e $\angle EWQ = 105^\circ$ f $\angle GUD = 100^\circ$
 2. a 45° b 70° c 15°
 d 135° e 165° f 90°

Exercise 4

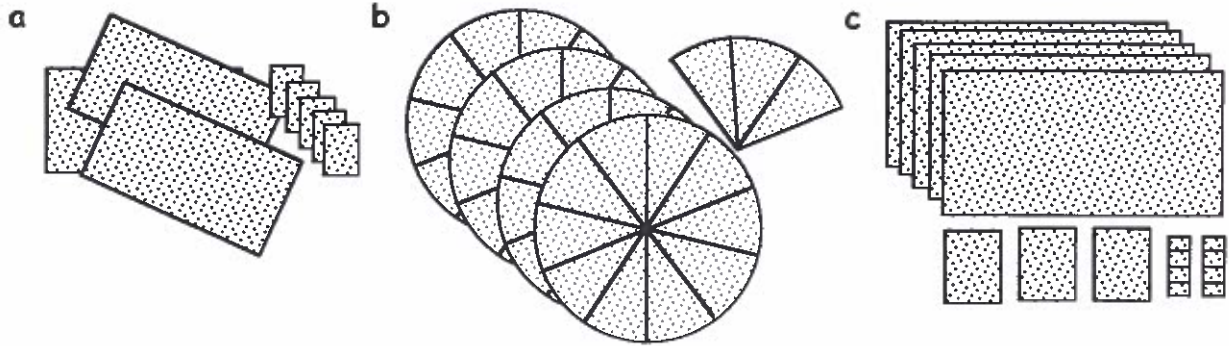
Check Drawings

CHAPTER 4

Consolidation



1. What decimal numbers do these diagrams represent ?



2. What does the 3 represent in each of the following decimal numbers :-

- a 243.716 b 4.035 c 0.3246 d 301.877 e 6.093 ?

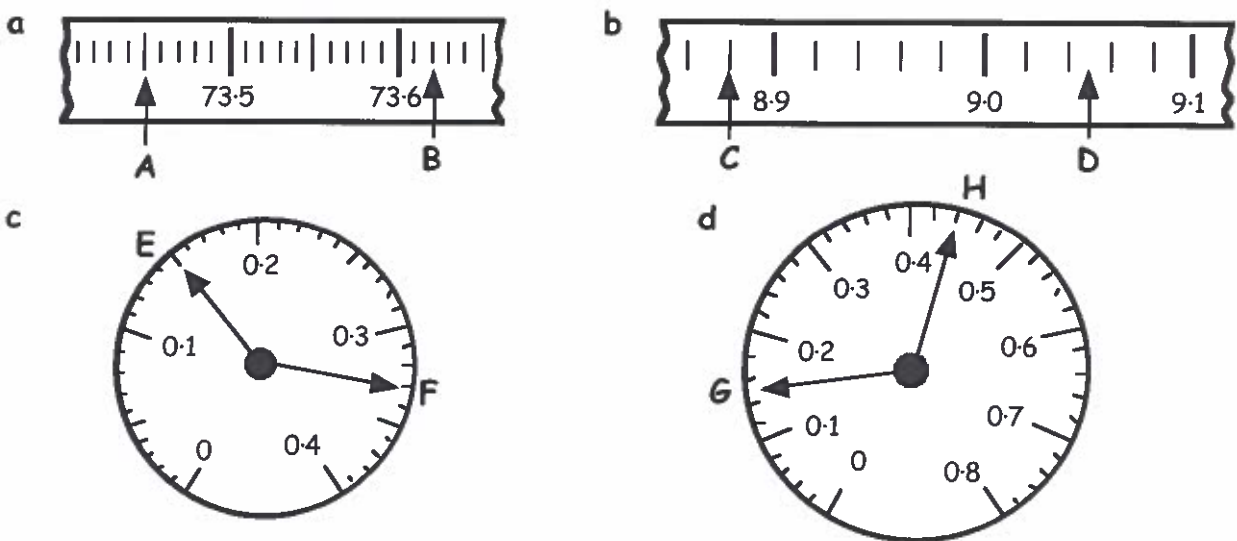
3. Arrange these decimal numbers in order, starting with the largest :-

0.865, 0.856, 0.809, 0.79, 0.866, 0.709, 1.004.

4. What number is :-

- a $\frac{7}{10}$ up from 2.5 b $\frac{3}{100}$ down from 1.41 c $\frac{9}{1000}$ up from 6.921 ?

5. What decimal number is the arrow pointing to in each case :-



6. Round these to the nearest whole £ :-

- a £8.23 b £1.75 c £18.67 d £19.48.

7. Round these measurements to the nearest **whole centimetre** :-

- a 6.4 cm b 9.7 cm c 8.47 cm d 23.15 cm.

8. Round these numbers to the nearest **whole number** :-

- a 3.4 b 7.9 c 9.18 d 45.549.

9. Round these numbers to **1 decimal place** :-

- a 2.34 b 4.917 c 12.49123 d 28.95112.

10. Round each number to **1 decimal place** and then find an **estimate** to :-

- a $6.195 + 4.613$ b $19.522 + 21.788$ c $10.631 - 3.426$ d $1.271 - 0.945$

11. Round these numbers to **2 decimal places** :-

- a 3.467 b 7.952 c 17.48808 d 56.53087.

12. Work out :-


- a $19.7 + 11.3$ b $6.84 + 7.6$ c $0.865 + 0.98$ d $19.3 + 2.578$
e $609.87 + 92$ f $4.8 - 3.9$ g $19.5 - 14.2$ h $58.7 - 30.8$
i $1.47 - 0.5$ j $67.3 - 45.91$ k $7 - 0.072$ l $2222 - 200.99$.

13. Show your working in answering these questions :-

- a A lawnmower full of grass weighs 17.5 kilograms.

When the 0.75 kg of grass is emptied from it,
what is the weight of the actual mower ?



- b  I cycle 12.8 miles from my house to the school.
Each day on the way home, I call in at my gran's which adds a
further 1.95 miles onto my homeward journey.

How far do I cover to and from school each day ?

- c A box of melons weighs 4.7 kg. What's the weight of 9 boxes ?



- d  Paul is a repair man and is paid daily.

What was his rate per hour when he received £98.88 for
working from 7.45 am until 3.45 pm ?

14. Copy the following and complete the calculations :-

- a 28.9 b 134.27 c 249.7×6 d 806.5×9

$$\begin{array}{r} 28.9 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 134.27 \\ \times 8 \\ \hline \end{array}$$

- e $4 \overline{) 23.6}$ f $6 \overline{) 47.34}$ g $109.6 \div 8$ h $1502.2 \div 7$.

15. Write down the answers to the following :-

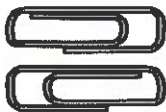
- a 9.3×10 b 10×0.205 c 100×5.2 d 3.03×100
e 100×0.0086 f 2.817×1000 g 1000×4.0404 h 62.01×1000 .

16. There are 1000 millilitres in 1 litre. How many millilitres are there in :-

- a 2.447 litres b 21.2 litres c 0.8 litres d 0.007 litres ?


17. Write down the answers to the following :-

- a $25.7 \div 10$ b $19 \div 10$ c $0.98 \div 10$ d $152.4 \div 100$
e $19 \div 100$ f $0.3 \div 100$ g $500 \div 1000$ h $26.09 \div 1000$.

18. a  The total weight of 100 paper clips is 97 grams.
What is the weight of 1 paper clip ?

- b Sam paid £210.80 for 10 dwarf conifer trees.
What price were they each ?




- c  One thousand people each paid £25.50 for a football ticket.
How much did the club make from them in total ?

19. a Grego the Bakers charge £4.68 for their home made cherry sponges.

If they sold 8 of them within half an hour of putting them on display how much money did they collect in that short period ?



- b  A small dairy farmer collects roughly 29.25 gallons of milk each day from his 9 cows.
How many gallons of milk on average does each cow produce per day ?

20. Calculate, using BOMDAS.

- a $5 + 6 \times 3$ b $45 - 6 \times 7$ c $4 \times 5 - 12 \div 6$
d $14 + 36 \div 9 - 17$ e $64 - 56 \div 8$ f $80 - 40 \div 10$
g $23 - 15 + 6 - 12$ h a quarter of $28 \div 7$ i a sixth of $60 - 9$
j $\frac{1}{2}$ of $30 \div 6$ k $17 + \frac{1}{3}$ of 21 l $26 - \frac{1}{4}$ of $84 + 1$
m $27 \div (7 - 4)$ n $25 - 22 \div 11 - 23$ o $9 \times (7 + 1) \div 6$.

Exercise 1

1. Find :-
- | | | | | | | | |
|---|----------------------|---|----------------------|---|-----------------------|---|---------------------|
| d | 37.8×50 | a | 4.25×20 | b | 26.4×30 | c | 5.72×40 |
| h | 0.04×90 | e | 61.27×60 | f | 219.4×70 | g | 325.09×80 |
| l | 437.6×500 | i | 0.073×200 | j | 10.97×300 | k | 0.0018×400 |
| p | 0.43×900 | m | 26.54×600 | n | 7.324×700 | o | 2.015×800 |
| t | 5.128×5000 | q | 0.073×2000 | r | 10.98×3000 | s | 2.05×4000 |
| x | 0.0054×9000 | u | 16.5×6000 | v | 100.1×7000 | w | 0.109×8000 |
| | | y | 0.003×10000 | z | 0.0004×20000 | | |

Exercise 2

1. Find :-
- | | | | | | | | |
|---|------------------|---|--------------------|---|-------------------|---|--------------------|
| a | $28.2 \div 20$ | b | $108.9 \div 30$ | c | $41.56 \div 40$ | d | $287.5 \div 50$ |
| e | $94.8 \div 60$ | f | $28.0 \div 70$ | g | $8.024 \div 80$ | h | $0.27 \div 90$ |
| i | $10.8 \div 200$ | j | $20.7 \div 300$ | k | $7.6 \div 400$ | l | $5.05 \div 500$ |
| m | $263.4 \div 600$ | n | $7.322 \div 700$ | o | $2.08 \div 800$ | p | $0.45 \div 900$ |
| q | $0.08 \div 2000$ | r | $10.98 \div 3000$ | s | $20.4 \div 4000$ | t | $5.15 \div 5000$ |
| u | $16.5 \div 6000$ | v | $7000.7 \div 7000$ | w | $0.032 \div 8000$ | x | $0.0054 \div 9000$ |
| y | $30 \div 10000$ | z | $500 \div 20000$ | | | | |
2. Find :-
- | | | | | | | | |
|---|-------------------|---|------------------|---|-----------------|---|----------------------|
| a | $544 \div 800$ | b | 5.19×60 | c | $45.43 \div 70$ | d | $327 \div 3000$ |
| e | $1.27 \div 50$ | f | 24.8×70 | g | $22.8 \div 600$ | h | $84 \div 6000$ |
| i | 129.9×80 | j | $0.432 \div 400$ | k | $0.009 \div 90$ | l | 0.0067×3000 |

Revision Exercise



1. Write these numbers using **digits** :-
- | | | | |
|---|------------------------|---|--------------------------------------|
| a | seven hundred and nine | b | eight thousand, two hundred and six. |
|---|------------------------|---|--------------------------------------|
2. Write these numbers in **words** :-
- | | | | | | | | |
|---|------|---|--------|---|---------|---|------------|
| a | 5306 | b | 19 004 | c | 147 800 | d | 7 895 010. |
|---|------|---|--------|---|---------|---|------------|

3. What does the 8 stand for in the number :-
 a 56 283 b 28 070 c 0.4289 d 2.84439?
4. Write the number that comes just :-
 a before 4080 b after 570 999 c before 900 000.
5. Rewrite each set of numbers in order. Start with the largest :-
 a 11 222, 9888, 9543, 10 989, 11 316, 10 898
 b 10.02, 10.98, 10.007, 10.088, 10.0915, 10.0177.

6. What numbers are the arrows pointing to ?



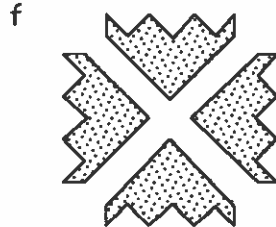
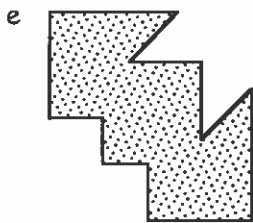
7. a Round to the nearest whole number :- (i) 48.5209 (ii) 8.4701.
 b Round to one decimal place :- (i) 25.76 (ii) 78.246.
 c Round to two decimal places :- (i) 12.1666 (ii) 0.9949.
8. Find :- a $6.8 + 5.7$ b $15.2 - 8.91$ c 19.7×3
 d $18.32 \div 8$ e 7.748×100 f $119.2 \div 10$ g $173 \div 1000$
 h $26.18 \div 20$ i 2.3264×300 j $8.08 \div 40$ k 0.32×2000
9. Find :- a $5 + 9 \times 3$ b $21 - 15 \div 3$ c $10 + 12 \div 2 - 15$
 d $9 \times (11 - 5)$ e $30 - 21 \div 3 - 19$ f $4 + \frac{1}{2}$ of $(40 - 8)$.

You may use a calculator for Q 10.



10. a Cut a pipe 32.5 metres long into 13 equal sections.
 What length is each section ?
- b A 5 litre watering can is leaking 25 ml of liquid every second.
 How long until it is empty ?
- c Thirty six 2.9 metre lengths of rope are laid end to end.
 What is the total length of rope ?
- d There are 17 cola cubes in a packet. Twenty packets are in a box.
 150 boxes on a palette.
 How many cola cubes are on a palette ?





Answers to Chapter 3

Consolidation

- a 5.08 am b 5.35 pm c 11.27 am d 10.50 pm
- a 0430 b 2109 c 2240 d 2045
- 3 hrs 50 mins
- a (i) 31 (ii) 30 b 16
- 17 minutes
- 1740

Exercise 1

- a 1040 b 1700 c 3 pm d 4.55 pm
e 2220 f 2025 g 0110 Tuesday
h 3.15 pm i 0400 Friday
- a 5 hrs b 2 hrs 35 mins
c 7 hrs 40 mins d 4 hrs 50 mins
e 4 hrs 45 mins f 7 hrs 45 mins
- No! 12 mins late!
- a 4 hrs 45 mins b 0525

Exercise 2

- a 7:25 pm b 7:28 pm c 1 min d 54 mins
e 1 hr 3 mins f No! 9 mins late!

Exercise 3

- a 1 min 23 secs b 2 mins 14 secs
c 3 mins 32 secs d 6 mins
e 15 mins f 12 mins 10 secs
- a 1 hr 15 mins b 2 hrs 25 mins
c 4 hrs 25 mins d 7 hrs 50 mins
e 20 hrs 15 mins f 50 hrs
- a 6 mins 45 secs b 10 mins 30 secs
- a 10 hrs 30 mins d 4 mins 45 secs
e 3 mins 25 secs f 30 mins
- 10 mins 39 secs

Exercise 4

- a 9.6 b 27.2 c 10.0
- Hastie Jonquin Roberts Kennan Weir Tomlie
- 0:58:93, by 24:09 secs
- 2 mins 9.8 secs

Revision Exercise

- a nine minutes to nine in the morning
b twenty three minutes to midnight
- a 6.09 am b 6.45 pm c 10.23 am d 11.40 pm
- a 0530 b 2007 c 2255 d 1845

- 5 hrs 51 mins
- a 14 b 49 c 1 min 14 secs
d 51 mins 51 secs
- a 1 min 12 secs b 2 mins 10 secs
c 3 mins 22 secs d 6 mins 15 secs
- a 1 hr 26 mins b 2 hrs 30 mins
c 3 hrs 13 mins d 7 hrs 3 mins
- a 10 mins 5 secs b 3 hrs 55 mins
- 1 min 38.05 secs
- a 0.17 secs b 1 min 22.78 secs

Answers to Chapter 4

Consolidation

- a 3.5 b 4.3 c 5.38
- a 3 units b 3 hundredths c 3 tenths
d 300 e 3 thousandths
- 1.004 0.866 0.865 0.856 0.809 0.79 0.709
- a 3.2 b 1.38 c 6.930
- A 73.45 B 73.62 C 8.88 D 9.05
E 0.15 F 0.33 G 0.15 H 0.44
- a £8 b £2 c £19 d £19
- a 6 cm b 10 cm c 8 cm d 23 cm
- a 3 b 8 c 9 d 46
- a 2.3 b 4.9 c 12.5 d 29.0
- a 10.8 b 41.3 c 7.2 d 0.4
- a 3.47 b 7.95 c 17.49 d 56.53
- a 31 b 14.44 c 1.845 d 21.878
e 701.87 f 0.9 g 5.3 h 27.9
i 0.97 j 21.39 k 6.928 l 2021.01
- a 16.75 kg b 27.55 m c 42.3 kg d £12.36
- a 202.3 b 1074.16 c 1498.2 d 7258.5
e 5.9 f 7.89 g 13.7 h 214.6
- a 93 b 2.05 c 520 d 303
e 0.86 f 2817 g 4040.4 h 62010
- a 2447 ml b 21200 ml c 800 ml d 7 ml
- a 2.57 b 1.9 c 0.098 d 1.524
e 0.19 f 0.003 g 0.5 h 0.02609
- a 0.97 g b £21.08 c £25500
- a £37.44 b 3.25 gallons
- a 23 b 3 c 18 d 1
e 57 f 76 g 2 h 1
i 1 j 2.5 k 24 l 6
m 9 n 0 o 12

Exercise 1

- a 85 b 792 c 228.8 d 1890
e 3676.2 f 15358 g 26007.2 h 3.6
i 14.6 j 3291 k 0.72 l 218800
m 15924 n 5126.8 o 1612 p 387
q 146 r 32940 s 8200 t 25640
u 99000 v 700700 w 872 x 48.6
y 30 z 8

Exercise 2

- | | | | |
|-------------|-----------|------------|-----------|
| a 1.41 | b 3.63 | c 1.039 | d 5.75 |
| e 1.58 | f 0.4 | g 0.1003 | h 0.003 |
| i 0.054 | j 0.069 | k 0.019 | l 0.0101 |
| m 0.439 | n 0.01046 | o 0.0026 | p 0.0005 |
| q 0.00004 | r 0.00366 | s 0.0051 | t 0.00103 |
| u 0.00275 | v 1.0001 | w 0.000004 | |
| x 0.0000006 | y 0.003 | z 0.025 | |
- | | | | |
|----------|-----------|----------|---------|
| a 0.68 | b 311.4 | c 0.649 | d 0.109 |
| e 0.0254 | f 1736 | g 0.038 | h 0.014 |
| i 10392 | j 0.00108 | k 0.0001 | l 20.1 |

Revision Exercise

- a 709 b 8206
- | |
|--|
| a five thousand three hundred and six |
| b nineteen thousand and four |
| c one hundred and forty seven thousand eight hundred |
| d seven million eight hundred and ninety five thousand and ten |
- | | | |
|------------|--------|-----------------|
| a 80 | b 8000 | c 8 thousandths |
| d 8 tenths | | |
- a 4079 b 571000 c 899999
- | | | | | | |
|---------|---------|--------|-------|---------|--------|
| a 11316 | 11222 | 10989 | 10898 | 9888 | 9543 |
| b 10.98 | 10.0915 | 10.088 | 10.02 | 10.0177 | 10.007 |
- | | | |
|--------|--------|---------|
| a 19.9 | b 6.72 | c 27.36 |
|--------|--------|---------|
- | | | | |
|------------|-----------|------------|-----------|
| a (i) 49 | (ii) 8 | b (i) 25.8 | (ii) 78.2 |
| c (i) 2.17 | (ii) 0.99 | | |
- | | | | |
|----------|---------|---------|---------|
| a 12.5 | b 6.29 | c 59.1 | d 2.29 |
| e 774.8 | f 11.92 | g 0.173 | h 1.309 |
| i 697.92 | j 0.202 | k 640 | |
- | | | |
|------|------|------|
| a 32 | b 16 | c 1 |
| d 54 | e 4 | f 20 |
- a 2.5 m b 200 secsc c 104.4 m d 51000

Answers to Chapter 5

Consolidation

- | | | |
|----------|------------|----------|
| a right | b obtuse | c acute |
| d reflex | e straight | f obtuse |
- | | | | | | | | |
|--------------|---------------|---------------|-------------|---------------|------------|-------------|-------------|
| a 56° | 4° | 79° | 61° | b 129° | 94° | 172° | 166° |
| c 90° | d 180° | e 186° | 299° | | | | |
- | | |
|-------------------------|--------------------------|
| a $\angle MPT 75^\circ$ | b $\angle URW 130^\circ$ |
|-------------------------|--------------------------|
- Check Drawings
- | | | | |
|--------------|---------------|---------------|---------------|
| a 90° | b 225° | c 135° | d 315° |
|--------------|---------------|---------------|---------------|

Exercise 1 Check Drawings

Exercise 2 Check Drawings

Exercise 3 Check Drawings

Exercise 4

- a 10° b 17° c 140° d 52°

- e 146° f 105° g 200° h 60°

Revision Exercise

- a acute b obtuse c reflex

2.



- acute, reflex

4. e.g.



- $\angle BYC = 140^\circ$

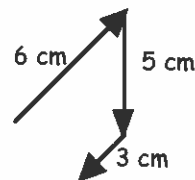
6. Check Drawing

7. Check Drawing

Answers to Chapter 6

Consolidation

- | | | | |
|---------------|---------------|--------------|---------------|
| a 90° | b 180° | c 45° | d 225° |
| e 270° | f 45° | | |
- | | |
|--------|------|
| a West | b NW |
|--------|------|
- Check Drawing



Exercise 1

- | | |
|---------------|---------------|
| a 5 cm (7 cm) | b 50 m (70 m) |
|---------------|---------------|
- | |
|-------------------------------------|
| a 2.5 cm by 4.2 cm (3.5 cm by 6 cm) |
| b 15 m by 25.2 m (21 m by 36 m) |
- | | |
|----------------|----------|
| a 700 m, 560 m | b 2520 m |
|----------------|----------|

Exercise 2

- Check Drawing - rectangle 8 cm by 6 cm
- Check Drawing - rectangle 6 cm by 4 cm
- Check Drawing - isosceles triangle 3 cm by 5 cm

Exercise 3

- | | |
|-----------------|-----------------|
| a Check Drawing | b 28.6 m (29 m) |
|-----------------|-----------------|
- | | | | |
|----------|---------|--------|---------|
| a 11.7 m | b 115 m | c 70 m | d 940 m |
|----------|---------|--------|---------|

Exercise 4

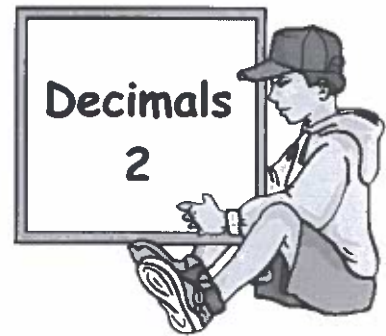
- | | | |
|---------------|---------------|---------------|
| a 270° | b 225° | c 315° |
| d 180° | e 000° | f 090° |
- | | | | |
|------|------|------|---------|
| a NE | b SW | c NW | d North |
|------|------|------|---------|
- | | | |
|---------------|---------------|---------------|
| a 007° | b 305° | c 355° |
|---------------|---------------|---------------|

Exercise 5

- | | | | |
|---------------|-------|---------------|---------------|
| a 060° | b 160 | c 250° | d 330° |
|---------------|-------|---------------|---------------|
- | | | | |
|---------------|---------------|---------------|---------------|
| a 030° | b 100° | c 220° | d 300° |
|---------------|---------------|---------------|---------------|

CHAPTER 7

Exercise 1



1. Write down the answers to the following :-

- a 5.7×10 b 4.25×10 c 10×8.36 d 10×17.84
e 0.87×10 f 10×0.03 g 10×1.234 h 0.0307×10 .

2. Write down the answers to :-

- a 5.67×100 b 1.65×100 c 100×7.04 d 100×9.5
e 4.613×100 f 100×0.864 g 100×0.0493 h 0.0027×100 .

3. Write down the answers to :-

- a 2.824×1000 b 3.090×1000 c 4.83×1000 d 1000×27.6
e 1000×0.975 f 0.0275×1000 g 1000×7.0707 h 1000×0.9001 .

4. A jar of strawberry jam weighs 0.345 kg. What is the weight of :-

- a 10 jars b 100 jars c 1000 jars ?



Exercise 2



1. Write down the answers to the following :-

- a $15.2 \div 10$ b $37.8 \div 10$ c $5.95 \div 10$ d $437.6 \div 10$
e $17.93 \div 10$ f $245.38 \div 10$ g $19.04 \div 10$ h $13 \div 10$.

2. Work out :-

- a $934.5 \div 100$ b $976.23 \div 100$ c $75.9 \div 100$ d $16.03 \div 100$
e $730 \div 100$ f $942 \div 100$ g $8.7 \div 100$ h $0.6 \div 100$.

3. Find :-

- a $8475.2 \div 1000$ b $39\,764.3 \div 1000$ c $9370 \div 1000$ d $836.1 \div 1000$
e $750 \div 1000$ f $300 \div 1000$ g $92.3 \div 1000$ h $14 \div 1000$.

4. a When 1000 paper clips were weighed, their total weight was 174 grams.
What was the weight of 1 paper clip ?



b 100 people formed a syndicate that got 4 numbers up in the Lotto.
If they received a total of £375, how much did each individual receive ?



Exercise 3



1. Copy the following and complete the calculations :-

a
$$\begin{array}{r} 2.68 \\ \times 4 \\ \hline \end{array}$$

b
$$\begin{array}{r} 8.97 \\ \times 2 \\ \hline \end{array}$$

c
$$\begin{array}{r} 18.3 \\ \times 5 \\ \hline \end{array}$$

d
$$\begin{array}{r} 45.93 \\ \times 7 \\ \hline \end{array}$$

e
$$\begin{array}{r} 40.87 \\ \times 8 \\ \hline \end{array}$$

f
$$\begin{array}{r} 160.76 \\ \times 9 \\ \hline \end{array}$$

g
$$\begin{array}{r} 465.7 \\ \times 3 \\ \hline \end{array}$$

h
$$\begin{array}{r} 334.79 \\ \times 6 \\ \hline \end{array}$$

2. Rewrite each of these in the above form and complete the calculations :-

a 9.8×6

b 17.6×8

c 7.64×4

d 18.76×9

3. A box of chocolates weighs 24.9 grams.

What is the weight of 5 boxes ? (show your working)



4.  Peter the plumber charges £32.69 per hour.

How much did he earn for working one day from 8.45 am till 3.45 pm ?
(show your working)

Exercise 4



1. Copy the following and complete the calculations :-

a
$$\begin{array}{r} 3 \overline{)16.47} \end{array}$$

b
$$\begin{array}{r} 2 \overline{)27.46} \end{array}$$

c
$$\begin{array}{r} 4 \overline{)50.76} \end{array}$$

d
$$\begin{array}{r} 5 \overline{)79.15} \end{array}$$

e
$$\begin{array}{r} 8 \overline{)0.56} \end{array}$$

f
$$\begin{array}{r} 6 \overline{)0.96} \end{array}$$

g
$$\begin{array}{r} 7 \overline{)111.58} \end{array}$$

h
$$\begin{array}{r} 9 \overline{)50.76} \end{array}$$

2. Rewrite each of these in the above form and complete the calculation :-

a $9.8 \div 2$

b $51.8 \div 7$

c $9.06 \div 3$

d $38.34 \div 6$

e $1.36 \div 4$

f $81.06 \div 6$

g $78.3 \div 9$

h $0.16 \div 8$

3. 6 packets of pastilles weigh 289.2 grams.

What is the weight of 1 packet ? (show your working)



4.  Winnie is paid £62.44 for working 7 hours as an hotel receptionist.

How much does she earn per hour ? (show your working)


5. What is one eighth of 3.936 ?

Exercise 5




1. I bought 9.5 square metres of carpet at £20.54 per square metre.
How much did it cost me altogether?



2.  If three bottles, holding 1.725 litres, 0.95 litres and 2.039 litres of liquid lawn feed are poured into a watering can, how much liquid will there be **altogether** in the can?


3. Brian has an annual salary of £20 236.80 and gets paid every month.
How much does he earn per month?



4.  Mrs Henderson took her two sons Go-Karting.
It cost £12.50 for herself and £6.75 for each of her sons.
What was the **total** cost?


5. Alison pays £255.87 for a 9 month's phone contract.
What does it cost her each month?



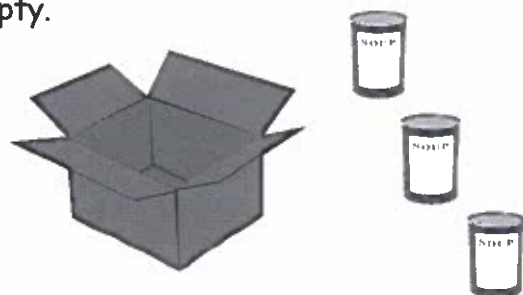
6.  Paula hired a carpet cleaning machine from a DIY store.
It cost her a £9.75 deposit **plus** £3.99 per hour.
If she collected the machine at 0830 and returned it at 1630
how much did she have to pay altogether?

7. High Drive are offering a package of 8 driving lessons for £179.84.
Easy Pass are selling a package of 6 driving lessons for £135.06.
Which driving school is cheaper per lesson and by how much?



8.  Doris buys five coffees each costing £2.99, four rounds of sandwiches at £1.95 each and three slices of apple pie at £2.48 per slice.
What change does she get from £35?

9. A cardboard box weighs 0.595 kg when empty.
Each tin of soup weighs 0.436 kg.
What is the total weight of a box containing 24 tins?



Revision Exercise



1. Write down the answers to :-


- | | | | | | | | |
|---|----------------------|---|--------------------|---|--------------------|---|------------------|
| a | 0.87×10 | b | 10×36.91 | c | 100×0.456 | d | 8.3×100 |
| e | 0.6004×1000 | f | 1000×1.99 | g | $34.8 \div 10$ | h | $0.37 \div 10$ |
| i | $760 \div 100$ | j | $9.87 \div 100$ | k | $5290 \div 1000$ | l | $58.2 \div 1000$ |

2. Set down and find :-

- | | | | | | | | |
|---|-----------------|---|-----------------|---|----------------|---|----------------|
| a | 3.56×7 | b | 6×4.74 | c | $6.465 \div 5$ | d | $11.55 \div 3$ |
|---|-----------------|---|-----------------|---|----------------|---|----------------|

3. How much change from **two** £2 coins will I receive if I buy a bun at £1.29 and a can of lemonade at 89 pence ?



4.  One tin of high gloss paint covers 7 square metres of a wall.


- a How many tins will I need for a fence with an area of 59.5 square metres ?
- b At £12.50 per tin, what will I have to pay ?

5. Mr Bennet bought four season tickets for the football at a total price of £1115.96.

What was the cost of 1 season ticket ?




You may use a calculator for the next 3 questions, but show all your working.

6.  This sack of potatoes weighs 8.925 kg.
A farm produces 85 sacks per day.
How many kg of potatoes is this ?
(Round your answer to 1 decimal place).



7. A rally car travelled 98.75 miles on 12.5 gallons of petrol.
How many miles to the gallon did the car get ?



8.  "Stickos" are selling boxes of 120 printer labels for £3.
"Label'em" are selling labels in rolls of 500 for £11.
Which printer label shop is cheaper per label and by how much ?

Exercise 5

- a 270° b 270° c 225°
d 270° e 225° f 315°
- SW
- South
- 135°

Revision Exercise

- a straight b right c acute
d obtuse e reflex f obtuse
- a 51° 2° 30° 69° b 126° 174° 95° 136°
c 90° d 180° e 187° 204°
- a $\angle AUR$ b $\angle JKL$ c $\angle VNK$ d $\angle QRO$
- a 35° b 142°
- Check Drawings
- a 90° b 270° c 135° d 45°
- NW
- a East b 225° 9. South East

Answers to Chapter 7

Exercise 1

- a 57 b 42.5 c 83.6 d 178.4
e 8.7 f 0.3 g 12.34 h 0.307
- a 567 b 165 c 704 d 950
e 461.3 f 86.4 g 4.93 h 0.27
- a 2824 b 3090 c 4830 d 27600
e 975 f 27.5 g 7070.7 h 900.1
- a 3.45 kg b 34.5 kg c 345 kg

Exercise 2

- a 1.52 b 3.78 c 0.595 d 43.76
e 1.793 f 2.4538 g 1.904 h 1.3
- a 9.345 b 9.7623 c 0.759 d 0.1603
e 7.3 f 9.42 g 0.087 h 0.006
- a 8.4752 b 39.7643 c 9.37 d 0.8361
e 0.75 f 0.3 g 0.0923 h 0.014
- a 0.174 g b $\pounds 3.75$

Exercise 3

- a 10.72 b 17.94 c 91.5 d 321.51
e 326.96 f 1446.84 g 1397.1 h 2008.74
- a 58.8 b 140.8 c 30.56 d 168.84
- 124.5 g
- $\pounds 228.83$

Exercise 4

- a 5.49 b 13.73 c 12.69 d 15.83
e 0.07 f 0.16 g 15.94 h 5.64
- a 4.9 b 7.4 c 3.02 d 6.39
e 0.34 f 13.51 g 8.7 h 0.02
- 48.2 g
- $\pounds 8.92$
- 0.492

Exercise 5

- $\pounds 195.13$
- 4.714 litres
- $\pounds 1686.40$
- $\pounds 26$
- $\pounds 28.43$
- $\pounds 41.67$
- High Drive by 3p per lesson ($\pounds 22.48$, $\pounds 22.51$)
- $\pounds 4.81$
- 11.059 kg

Revision Exercise

- a 8.7 b 3.691 c 45.6 d 830
e 600.4 f 1990 g 3.48 h 0.037
i 7.6 j 0.0987 k 5.29 l 0.0582
- a 24.92 b 28.44 c 1.293 d 3.85
- $\pounds 1.82$
- a 9 b $\pounds 112.50$
- $\pounds 278.99$
- 758.625 kg
- 7.9 mpg
- "Label'em" by 0.3p per label (2.5p and 2.2p)

Answers to Chapter 8

Exercise 1

- a 20 b 35 c 80 d 90
e 65 f 125
- a 4 b 10 c 20 d 20
e 70 f 26
- Various
- a Denmark b India c Russia d Poland

Exercise 2

- a $\pounds 17.14$ b $\pounds 2.86$ c $\pounds 26.24$ d $\pounds 32.32$
e $\pounds 12.74$ f $\pounds 2.29$ g $\pounds 33.09$ h $\pounds 5.01$
- a $\pounds 9.52$ b $\pounds 15.76$ c $\pounds 53.22$ d $\pounds 21.52$
e $\pounds 13.71$ f $\pounds 23.75$ g $\pounds 20.23$ h $\pounds 29.34$
- a $\pounds 0.70$ b $\pounds 1.63$ c $\pounds 0.90$ d $\pounds 2.38$
e $\pounds 1.32$ f $\pounds 2.57$ g $\pounds 2.17$ h $\pounds 0.47$
- a $\pounds 74.20$ b $\pounds 1.67$

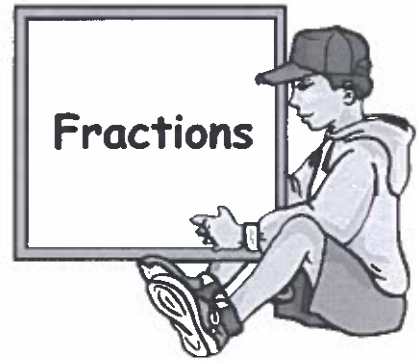
Exercise 3

- a $\pounds 4.28$ b $\pounds 6.84$ c $\pounds 13.68$ d $\pounds 10.38$
- a $\pounds 9.40$ b $\pounds 11.09$ c $\pounds 34.87$ d $\pounds 23.14$
- 6 lollies and 4 sugar mice

Exercise 4

- a 10p b 16p
- a Large one b shorter hose will do.
- Middle one - cheaper per kg

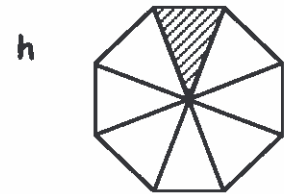
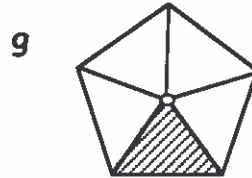
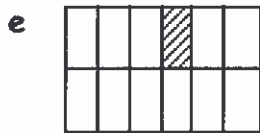
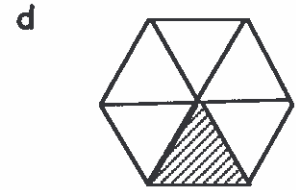
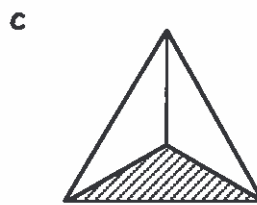
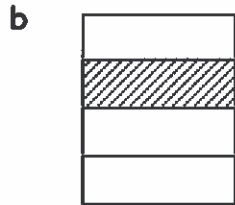
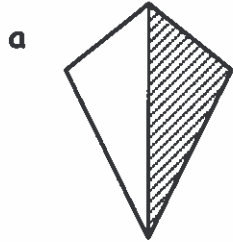
CHAPTER 11



Exercise 1

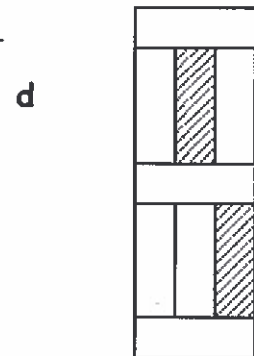
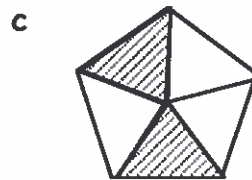
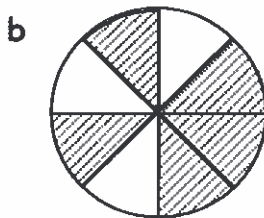
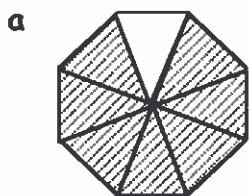


1. What fraction of each shape is the shaded bit ?



Exercise 2

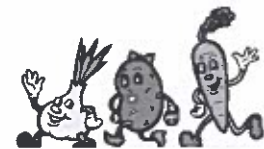
1. For each of the following, write the fraction that is shaded :-



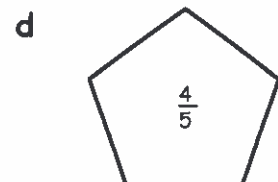
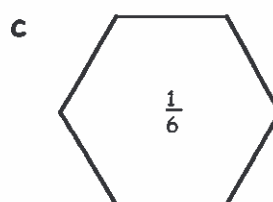
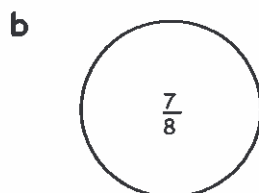
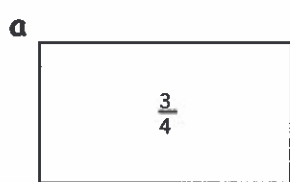
2. Jenny has 19 vegetables in her basket. She has 10 potatoes, 7 carrots and the rest are onions.

What fraction of the 19 are :-

- a potatoes b carrots c onions ?



3. Trace or copy each of these shapes, divide it up and shade the fraction asked for :-



Exercise 3

1. Write down **two** fractions equivalent to :-

a $\frac{1}{2}$

b $\frac{2}{5}$

c $\frac{4}{7}$

d $\frac{5}{9}$.

2. Simplify as far as possible :-

a $\frac{6}{8}$

b $\frac{8}{10}$

c $\frac{10}{14}$

d $\frac{30}{50}$

e $\frac{24}{32}$

f $\frac{30}{45}$

g $\frac{15}{21}$

h $\frac{16}{20}$

i $\frac{60}{80}$

j $\frac{10}{200}$

k $\frac{80}{120}$

l $\frac{75}{100}$

m $\frac{44}{55}$

n $\frac{38}{57}$

o $\frac{480}{600}$

p $\frac{49}{147}$.

Exercise 4

1. Find :-

a $\frac{1}{3}$ of 12

b $\frac{1}{2}$ of 16

c $\frac{1}{4}$ of 20

d $\frac{1}{5}$ of 30

e $\frac{1}{6}$ of 42

f $\frac{1}{7}$ of 35

g $\frac{1}{8}$ of 32

h $\frac{1}{9}$ of 63

i $\frac{1}{6}$ of 318

j $\frac{1}{4}$ of 648

k $\frac{1}{7}$ of 931

l $\frac{1}{10}$ of 320.

2. a There are 30 days in June.
Alf cut his lawn at some point on $\frac{1}{6}$ of those days.
On how many days did he cut his lawn?



b



Tony had a fine set of 24 teeth but had to have a **quarter** of them removed due to infection.

How many teeth was Tony left with?

3. Noreen was on a 50 mile journey to her uncle Ted's.
She ran out of petrol one **tenth** of the way there.
- a How far had Noreen driven before she ran out?
b How many miles had she still to go to her uncle's?



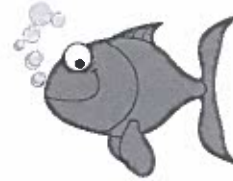
Exercise 5

1. Find :-

- | | | | |
|--------------------------|--------------------------|----------------------------|--------------------------|
| a $\frac{2}{3}$ of £18 | b $\frac{3}{4}$ of £28 | c $\frac{2}{5}$ of £35 | d $\frac{3}{7}$ of £21 |
| e $\frac{5}{8}$ of £40 | f $\frac{7}{10}$ of £60 | g $\frac{2}{9}$ of £72 | h $\frac{5}{16}$ of £48 |
| i $\frac{7}{20}$ of £120 | j $\frac{4}{25}$ of £250 | k $\frac{11}{100}$ of £300 | l $\frac{9}{15}$ of £75. |

2. Of the 20 fish in a garden pond $\frac{3}{5}$ are goldfish.

- a How many goldfish are in the pond ?
- b How many other breeds of fish are there ?



3.

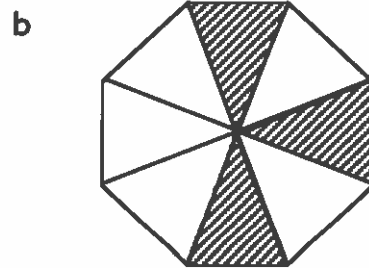
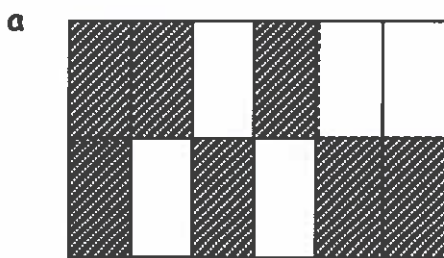


There are 280 trees in an orchard, of which $\frac{5}{7}$ are apple trees and the rest pear trees.

- a How many apple trees are there in the orchard ?
- b How many pear trees ?

Revision Exercise

1. For each shape, say what fraction has been shaded :-



2. For each shape in question 1, write down the fraction **not** shaded.

3. Copy and complete :-

a $\frac{1}{5} = \frac{?}{10}$

b $\frac{2}{3} = \frac{8}{?}$

c $\frac{?}{9} = \frac{55}{99}$.

4. Write down **two** fractions equivalent to :-

a $\frac{1}{8}$

b $\frac{2}{7}$

c $\frac{9}{10}$.

5. Write each of these fractions in their **simplest** form :-

a $\frac{8}{12}$

b $\frac{14}{35}$

c $\frac{32}{48}$

6. Find :-

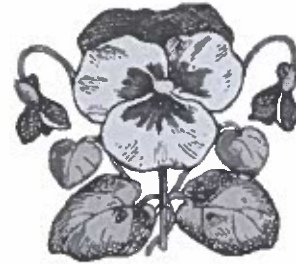
a $\frac{1}{4}$ of £28

b $\frac{1}{7}$ of 49 grams

c $\frac{1}{11}$ of 77 dollars.

7. Amy has 24 plants in her greenhouse.

- a **quarter** are busy lizzies
- a **third** are pansies
- a **sixth** are lobelia
- the rest are begonia.



a How many busy lizzies does Amy have ?

b How many lobelia ?

c How many begonia ?

8. Find :-

a $\frac{2}{5}$ of £30

b $\frac{5}{7}$ of 210 grams

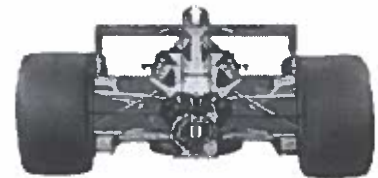
c $\frac{5}{8}$ of 7200 euros.

9. 120 racing cars started a race.

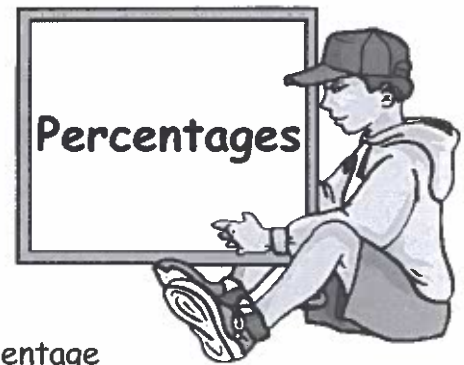
After twenty laps, $\frac{1}{6}$ of them dropped out of the race.

By the end of the race $\frac{9}{10}$ of the cars **remaining** had ran out of fuel.

How many racing cars had no fuel left in their tanks ?



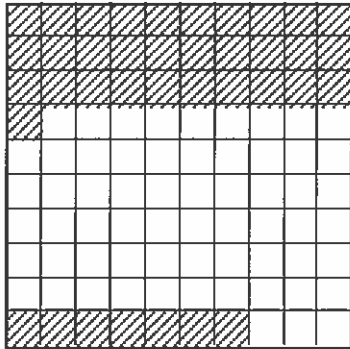
CHAPTER 12



Exercise 1



1.



Write down what percentage of the whole square the shaded part is.

2. Write each of these as a fraction :-

- a 27% b 13% c 9% d 1%.

3. Write each of these as a decimal :-

- a 39% b 94% c 10% d 4%.

4. Write each fraction or decimal as a percentage :-

- a $\frac{73}{100}$ b 0.05 c $\frac{7}{100}$ d 0.8.

5. Write each percentage as a fraction in its simplest form :-

- a 40% b 8% c 85% d $12\frac{1}{2}\%$.

Exercise 2



1. Copy and complete each of the following :-

- a $\frac{7}{25} = 7 \div 25 = 0.\dots = \dots\%$ b $\frac{25}{80} = 25 \div \dots = 0.\dots = \dots\%$.

2. Change each of the fractions shown to a decimal then to a percentage :-

- a $\frac{9}{36}$ b $\frac{21}{28}$ c $\frac{14}{40}$ d $\frac{80}{500}$.



3. George scored $\frac{42}{75}$ in his Art exam. Change his mark to a percentage.

4.



Of the 20 pies in a baker's window, 13 of them were filled with cherries.

What percentage of the pies were cherry pies ?

Exercise 3




1. Work out each of the following :-

- a 50% of £18 b 25% of 20p c 10% of 90 cm d 50% of £49
e 25% of 300 g f 10% of £2550 g 25% of £2 h 10% of £3.40.

2. a Tiger had £670. He spent 50% of that, buying golf clubs.
How much did Tiger pay for the clubs?



b  Toby weighed 76 kilograms.
He ate too many burgers and put on 25% of his weight.
How many kilograms did he put on?

c This £299 camera is on offer in a sale with 10% off.
What is the sale price of the camera?



10% OFF

Exercise 4



1. Calculate each of the following :-

- a 12% of £200 = $(12 \div 100) \times £200 =$ £.....
b 18% of £60 c 32% of 50p d 85% of 28 km e 91% of 180 mm
f 6% of 20 kg g 22.5% of £120 h 2.4% of £800 i 8.75% of £6000.


2. a There are 120 tennis balls in a ball machine. 55% of them are yellow.

(i) How many balls are yellow? (ii) How many are not yellow?



b Of the 2550 cabbages bought in by a supermarket chain,
8% had been part eaten by caterpillars.
How many cabbages was this?



c  Kath earns £32 800 per year. Ken earns £30 020 per year.
Kath got a 3% pay rise and Ken got a 4% rise.
In money terms, who got the bigger rise and by how much?

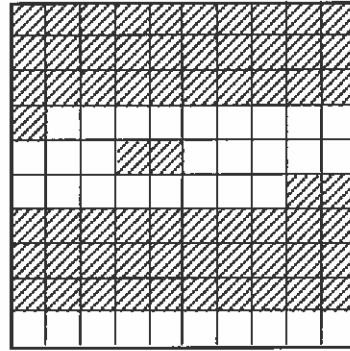
d A Boeing 747 was set out to carry 480 passengers.
 $12\frac{1}{2}\%$ of the seats were business class.
How many of the 480 seats were business class?



Revision Exercise



1. Write down what percentage of the whole square the shaded part is.



2. Write each of the following as a fraction :-

a 67% b 11% c 39% d 3%.

3. Write each of the following as a decimal :-

a 83% b 14% c 20% d 8%.

4. Write each of the following as a fraction and as a decimal :-

a 13% b 67% c 1% d 90%.

5. Write each fraction or decimal as a percentage :-

a $\frac{81}{100}$ b 0.94 c $\frac{5}{100}$ d 0.09.

6. Find :-

a 50% of 60p b 25% of 72 km c 50% of £13 d 10% of 9 cm.

You may use a calculator from now on, but you must show working.



7. Find :-

a 14% of £30 b 38% of 65 mm c 12.5% of £192 d 5.2% of 300 kg.

8. Of the 3200 houses built in the new Phoenix estate 62.5% of them have an adjoining garage.

87½% of these garages have electric doors.



- a How many houses were built with an adjoining garage?
b How many garages were not built with an electric door?

9. The cost of this laptop in a local store was £332 last month. This month, the price has risen by 7½%. What's the price now?



Exercise 5

- £72.50
- £9.87
- 8 pack. 2p cheaper per brownie.
- £302.78
- £49.12

Revision Exercise

- a £2.62 b Various
- a £22.76 b £30.97 c £50.16 d £1.87
- Box of 6. 2p each cheaper.
- Large one better by 1p per 100 kg.
- a £9.84 b £39.36
- a £180 b £36

Answers to Chapter 9

Exercise 1

- a circle b rectangle
c triangle d rhombus & hexagon
- 1 square, 5 triangles, 1 parallelogram
- a 6 b 8 c 10 d 12
- Pentagon

Exercise 2

- a equilateral b isosceles
c scalene
- a scalene b isosceles
c equilateral d right angled isosceles

Exercise 3

- (i) $\triangle KHT$ obtuse (ii) $\triangle YUM$ acute
(iii) $\triangle RSE$ right (iv) $\triangle QWN$ acute
(v) $\triangle VCZ$ obtuse (vi) $\triangle AFJ$ acute

Exercise 4

- a $\triangle ABC$ acute equilateral
b $\triangle DEF$ acute scalene
c $\triangle GHK$ right angled isosceles
d $\triangle LMN$ obtuse scalene
e $\triangle PQR$ obtuse isosceles

Exercise 5

- 5.5 cm
- 27 mm
- 44 mm (62 mm - A4)
- a 7 cm b 3.5 cm

Revision Exercise

- a hexagon b decagon
- pentagon, equilateral triangle, semi-circle, square
isosceles triangle, kite, rectangle, R A triangle
- a equilateral b isosceles c scalene

- a acute b right c obtuse
- obtuse angled scalene triangle HNS
- 6.1 cm
- 40 cm

Answers to Chapter 10

Exercise 1

- a 80 b 26 c 63
d 7 e 207 f 2.8
- a 23 b 128 c 6 d 140
- a +17 b -57 c +6.4 d $\div 10$

Exercise 2

- a 9 b 10 c 9
d 9 e 17 f 8
g 97 h 4.01 i 4500
- a 7 b 8 c 11
- a $* \div 7 = 20$, $* = 140$ b $* + 5.8 = 12.5$, $* = 6.7$

Exercise 3

- a 8 b 25 c 9
d 21 e 0 f 100
g 5 h 20 i 3.6
j 29 k 9 l 7
- a $p + 11 = 20$, $p = 9$ b $3e = 24$, $e = 8$
c $y + 19 = 32$, $y = 13$
- $210 \div 6 = *$, $* = 35$ £35
- $* \div 3 = 9$, $* = 27$ 27 rollos

Revision Exercise

- a $* = 11$ b $* = 15$ c $* = 9$
- a 16 b 7 c 40
d 30 e 9 f 0
g 10 h 9.9 i 120
- a minus b times c divide d minus
e divide f times g divide h plus
i minus
- a 20 b 41 c 7
d 64 e 60 f 9
- a $* + 13 = 31$ b $* = 18$ 18 pounds
- a i 200 ii 60
b i 0.15 ii 975

Answers to Chapter 11

Exercise 1

- a $\frac{1}{2}$ b $\frac{1}{4}$ c $\frac{1}{3}$ d $\frac{1}{6}$
e $\frac{1}{12}$ f $\frac{1}{8}$ g $\frac{1}{5}$ h $\frac{1}{8}$

Exercise 2

- a $\frac{7}{8}$ b $\frac{5}{8}$ c $\frac{2}{5}$ d $\frac{2}{9}$

2. a $\frac{10}{19}$ b $\frac{7}{19}$ c $\frac{2}{19}$

3. Check Drawings

Exercise 3

1. a $\frac{2}{4}$ $\frac{3}{6}$ b $\frac{4}{10}$ $\frac{6}{15}$ c $\frac{8}{14}$ $\frac{12}{21}$ d $\frac{10}{18}$ $\frac{15}{27}$

2. a $\frac{3}{4}$ b $\frac{4}{5}$ c $\frac{5}{7}$ d $\frac{3}{5}$

e $\frac{3}{4}$ f $\frac{2}{3}$ g $\frac{5}{7}$ h $\frac{4}{5}$

i $\frac{3}{4}$ j $\frac{1}{20}$ k $\frac{2}{3}$ l $\frac{3}{4}$

m $\frac{4}{5}$ n $\frac{2}{3}$ o $\frac{4}{5}$ p $\frac{1}{3}$

Exercise 4

1. a 4 b 8 c 5 d 6
e 7 f 5 g 4 h 7
i 53 j 162 k 133 l 32

2. a 5 b 18

3. a 5 miles b 45 miles

Exercise 5

1. a £12 b £21 c £14 d £9
e £25 f £42 g £16 h £15
i £42 j £40 k £33 l £45

2. a 12 b 8

3. a 200 b 80

Revision Exercise

1. a $\frac{7}{12}$ b $\frac{3}{8}$

2. a $\frac{5}{12}$ b $\frac{5}{8}$

3. a $\frac{2}{10}$ b $\frac{8}{12}$ c $\frac{5}{9}$

4. a $\frac{2}{16}$ $\frac{3}{24}$ b $\frac{4}{14}$ $\frac{6}{21}$ c $\frac{18}{20}$ $\frac{27}{30}$

5. a $\frac{2}{3}$ b $\frac{2}{5}$ c $\frac{2}{3}$

6. a £7 b 7 g c 7 dollars

7. a 6 b 4 c 6

8. a £12 b 150 g c 4500 euros

9. 90

Answers to Chapter 12

Exercise 1

1. 38%

2. a $\frac{27}{100}$ b $\frac{13}{100}$ c $\frac{9}{100}$ d $\frac{1}{100}$

3. a 0.39 b 0.94 c 0.1 d 0.04

4. a 73% b 5% c 7% d 80%

5. a $\frac{2}{5}$ b $\frac{2}{25}$ c $\frac{17}{20}$ d $\frac{1}{8}$

Exercise 2

1. a 28% b 31.25%

2. a 25% b 75% c 35% d 16%

3. 56%

4. 65%

Exercise 3

1. a £9 b 5p c 9 cm d £24.50

1. e 75 g f £255 g 50p h 34p

2. a £335 b 19 kg c £269.10

Exercise 4

1. a £24 b £10.80 c 16p
d 23.8 km e 163.8 mm f 1.2 kg
g £27 h £19.20 i £525

2. a (i) 66 (ii) 54 b 204

c Ken by £216.80 d 60

Revision Exercise

1. 65%

2. a $\frac{67}{100}$ b $\frac{11}{100}$ c $\frac{39}{100}$ d $\frac{3}{100}$

3. a 0.83 b 0.14 c 0.2 d 0.08

4. a $\frac{13}{100}$ 0.13 b $\frac{67}{100}$ 0.67 c $\frac{1}{100}$ 0.01 d $\frac{90}{100}$ 0.9

5. a 81% b 94% c 5% d 9%

6. a 30p b 18 km c £6.50 d 0.9 cm

7. a £4.20 b 24.7 mm c £24 d 15.6 kg

8. a 2000 b 250

9. £356.90

Answers to Chapter 13a

Exercise 1

1. a 3.6 (5.1) b 5.7 (8.0) c 1.8 (2.5) d 5.2 (7.4)

2. a 2.3 (3.3) b 6.8 (9.4)

3. a 2.8 (3.9), 3.5 (5.0), 6.6 (9.4), 2.4 (3.4)

b 4.2 (6.0) - all cm 4. Check Drawings

Exercise 2

1. a 100 b 1000 c 10
d 1000 e 100000 f 1000000

2. a 90 b 62 c 123 d 2.5

3. a 4 b 8.5 c 250 d 0.3

4. a 600 b 50 c 50000 d 1

5. a 8 b 13 c 0.75 d 0.20

6. a 5000 b 2250 c 3700 d 800

7. a 6 b 4.25 c 0.81 d 200

Exercise 3

1. a 508 mm b 50.8 cm

2. a 2200 mm b 2131 mm

3. 45 mm

4. 25 cm

5. 5.68 m