

Cardinal Newman High School

Mathematics Department



S3 (C) Homework Booklet

Mathematics

Homework tasks should be completed in pupil's homework jotter. Please **do not** write on this booklet as it will be returned to the teacher.

Homework should be presented neatly using a pencil and all working shown.

Pupils should use their homework diary to record the given task and completion date.

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Exercise 1

- Using BODMAS, find:
a. $4 + 2 \times 5$ b. $10 + 4 \div 2$
c. $8 - 3 \times 2$ d. $12 - 8 \div 4$
- Round to the nearest whole number:
a. 3.4 b. 4.5 c. 12.7
d. 0.34 e. 0.62 f. 26.89
g. 2.453 h. 32.851 i. 40.147
- Copy and complete the following using either the symbol > or <.
a. 6 7 b. 9 5 c. 0 3

Exercise 2

- Using BODMAS, find:
a. $8 + 2 \times 7$ b. $12 + 12 \div 2$
c. $15 \div 3 + 2$ d. $12 + 8 \div 4$
- Round to the nearest whole number:
a. 3.8 b. 4.3 c. 10.9
d. 0.39 e. 0.82 f. 32.45
g. 0.653 h. 22.841 i. 50.476
- Copy and complete the following using either the symbol > or <.
a. 10 11 b. -4 5 c. 0 -3

Exercise 3

- Using BODMAS, find:
a. $3 \times 12 \div 3$ b. $14 + 10 \div 2$
c. $24 - 8 \div 4$ d. $32 + 8 \div 4$
- Round to the nearest whole number:
a. 4.51 b. 9.62 c. 18.79
d. 0.492 e. 3.052 f. 75.099
g. 143.69 h. 66.5739 i. 760.84
- Copy and complete the following using either the symbol > or <.
a. 1 0 b. -9 -7 c. -10 -12

Exercise 4

- Using BODMAS, find:
a. $9 + 12 \div 3$ b. $1 + 8 \div 2$
c. $14 - 7 \div 7$ d. $28 + 8 \div 4$
- Round to the nearest whole number:
a. 3.01 b. 4.53 c. 10.49
d. 0.092 e. 0.652 f. 45.455
g. 110.05 h. 27.8418 i. 79.944
- Copy and complete the following using either the symbol > or <.
a. 15 12 b. -4 -5 c. -6 -3

<p>Exercise 1</p> <ol style="list-style-type: none">1. Chris is paid a basic rate of £5.50 per hour for his work as a shop assistant. On Saturdays he is paid at a time and a half, while on Sundays he receives pay at double time. Calculate Chris's pay on a week where he works 35 basic hours, 7 hours on a Saturday and 4 hours on a Sunday.2. If Kamran earns £160 per week as a mechanic, calculate his annual pay.3. If Toni earns an annual salary of £15800, calculate her a. monthly & b. weekly pay.4. Sandeep wants to buy a TV from Host Electrics. They offer the model she wants for a deposit of £170 plus six monthly payments of £180. Calculate the total cost of the TV.	<p>Exercise 2</p> <ol style="list-style-type: none">1. Alana is paid a basic rate of £9.50 per hour for her work as an engineer. On Saturdays she is paid at double time, while on Sundays he receives pay at treble time. Calculate Alana's pay on a week where she works 40 hours Monday to Friday, 6 hours on a Saturday and 6 hours on a Sunday.2. If Fatima earns £210 per week as a beautician, calculate her annual pay.3. If Kai earns an annual salary of £18700, calculate his a. monthly & b. weekly pay.4. Kelly wants to buy a console from Electric World. They offer the model she wants for a deposit of £55 plus five monthly payments of £85.50. Calculate the total cost of the console.
<p>Exercise 3</p> <ol style="list-style-type: none">1. Rory is paid a basic salary of £10.50 per week. On Saturdays he is paid at a time and a half, while on Sundays he receives pay at treble time. Calculate Rory's pay on a week where he works 45 basic hours, 7 hours on a Saturday and 4 hours on a Sunday.2. If Zach earns £750 per week as a banker, calculate his annual pay.3. If Zaynah earns an annual salary of £45500, calculate her a. monthly & b. weekly pay.4. Lily wants to buy a TV from Zapp Goods. They offer the model she wants for a deposit of £250 plus ten monthly payments of £220. Calculate the total cost of the TV.	<p>Exercise 4</p> <ol style="list-style-type: none">1. Zeeshan is paid a basic rate of £14.50 per hour for his work as a DJ. On Saturdays he is paid at a time and a half, while on Sundays he receives pay at double time. Calculate Zeeshan's pay on a week where he works 28 basic hours, 6 hours on a Saturday and 5 hours on a Sunday.2. If Kouram earns £960 per week as an actuary, calculate his annual pay.3. If Anna earns an annual salary of £55500, calculate her a. monthly & b. weekly pay.4. Poppy wants to buy a TV from Bandit Stores. They offer the model she wants for a deposit of £300 plus eight monthly payments of £190. Calculate the total cost of the TV.

Numeracy	1•1
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Exercise 1

- Find:
a. 10×23 b. 32×10 c. 10×425
d. 100×39 e. 47×100 f. 100×836
g. 1000×65 h. 72×1000 i. 1000×978
- Find:
a. 20×62 b. 40×57 c. 87×60
- Find:
a. 300×85 b. 700×32 c. 41×900
- Find:
a. 3000×76 b. 4000×365 c. 428×2000
- Round each to the nearest (i) 10 (ii) 100 (iii) 1000
a. 174 b. 5048 c. 8955

Exercise 2

- Find:
a. 10×36 b. 88×10 c. 10×906
d. 100×31 e. 84×100 f. 100×775
g. 1000×40 h. 96×1000 i. 1000×682
- Find:
a. 50×76 b. 70×85 c. 83×80
- Find:
a. 400×54 b. 800×99 c. 80×500
- Find:
a. 2000×69 b. 3000×794 c. 807×5000
- Round each to the nearest (i) 10 (ii) 100 (iii) 1000
a. 636 b. 3552 c. 9993

Exercise 3

- Find:
a. 10×77 b. 88×10 c. 10×111
d. 100×27 e. 113×100 f. 100×669
g. 1000×97 h. 487×1000 i. 1000×999
- Find:
a. 30×154 b. 70×288 c. 1987×40
- Find:
a. 900×195 b. 700×275 c. 1950×800
- Find:
a. 6000×259 b. 4000×909 c. 978×7000
- Round each to the nearest (i) 10 (ii) 100 (iii) 1000
a. 805 b. 10354 c. 21195

Exercise 4

- Find:
a. 10×965 b. 208×10 c. 10×1108
d. 100×294 e. 487×100 f. 100×1536
g. 1000×615 h. 752×1000 i. 1000×1978
- Find:
a. 80×72 b. 60×148 c. 637×90
- Find:
a. 300×85 b. 700×32 c. 71×900
- Find:
a. 4000×76 b. 8000×365 c. 428×9000
- Round each to the nearest (i) 10 (ii) 100 (iii) 1000
a. 1076 b. 51938 c. 124754

Exercise 1

Non-Calculator Exercises

- Find:
 - $50 \div 10$
 - $300 \div 10$
 - $900 \div 100$
 - $1200 \div 100$
 - $6000 \div 1000$
 - $77000 \div 1000$
- Find:
 - $240 \div 20$
 - $540 \div 30$
- Find:
 - $3300 \div 300$
 - $6400 \div 800$
- Find:
 - $18000 \div 3000$
 - $21000 \div 7000$
- There are 6500 fruit chews in 500 large boxes. How many fruit chews are in each box?

Exercise 2

- Find:
 - $70 \div 10$
 - $370 \div 10$
 - $800 \div 100$
 - $3100 \div 100$
 - $9000 \div 1000$
 - $275000 \div 1000$
- Find:
 - $360 \div 40$
 - $990 \div 90$
- Find:
 - $2700 \div 300$
 - $4800 \div 800$
- Find:
 - $32000 \div 8000$
 - $63000 \div 7000$
- A pools syndicate of 40 people wins £64000. If everyone gets an equal share, how much should each member of the syndicate receive?

Exercise 3

- Find:
 - $210 \div 10$
 - $3010 \div 10$
 - $400 \div 100$
 - $80200 \div 100$
 - $11000 \div 1000$
 - $902000 \div 1000$
- Find:
 - $360 \div 90$
 - $480 \div 60$
- Find:
 - $2000 \div 400$
 - $3500 \div 500$
- Find:
 - $36000 \div 9000$
 - $84000 \div 7000$
- A benefactor leaves £78000 in his will to be shared equally among 60 charities. How much money should each charity receive?

Exercise 4

- Find:
 - $700 \div 10$
 - $3020 \div 10$
 - $80000 \div 100$
 - $650000 \div 100$
 - $50000 \div 1000$
 - $27000 \div 1000$
- Find:
 - $320 \div 40$
 - $450 \div 90$
- Find:
 - $2400 \div 800$
 - $7200 \div 600$
- Find:
 - $40000 \div 8000$
 - $49000 \div 7000$
- A football squad of 30 receive a combined bonus of £5,400,000. If the bonus is shared equally, how much does each player get?

Exercise 1

1. Find:
 a. 10×1.3 b. 7.2×10 c. 10×1.07
 d. 100×2.55 e. 8.42×100 f. 100×9.5
 g. 1000×5.41 h. 6.32×1000 i. 1000×2.7
2. Find:
 a. 20×7.6 b. 40×2.9
 c. 3.1×60 d. 80×7.9
3. Find:
 a. 300×8.21 b. 700×2.56
 c. 2.4×900 d. 3.6×500
4. Find:
 a. 2000×6.231 b. 6000×9.025
 c. 8.53×3000 d. 5.24×4000

Exercise 2

1. Find:
 a. 10×12.5 b. 13.2×10 c. 10×13.07
 d. 100×32.52 e. 28.41×100 f. 100×94.7
 g. 1000×3.31 h. 2.3×1000 i. 1000×12.7
2. Find:
 a. 40×17.2 b. 50×21.7
 c. 33.1×20 d. 80×13.9
3. Find:
 a. 200×53.28 b. 400×25.36
 c. 13.4×900 d. 63.9×700
4. Find:
 a. 2000×10.241 b. 3000×59.905
 c. 28.63×8000 d. 75.24×9000

Exercise 3

1. Find:
 a. 10×0.5 b. 1.02×10 c. 10×0.07
 d. 100×0.08 e. 0.85×100 f. 100×0.801
 g. 1000×0.2 h. 0.03×1000 i. 1000×10.07
2. Find:
 a. 40×0.2 b. 50×0.34
 c. 0.06×90 d. 80×0.051
3. Find:
 a. 200×0.03 b. 400×0.077
 c. 0.002×900 d. 0.0076×700
4. Find:
 a. 6000×0.004 b. 3000×0.0097
 c. 0.0003×8000 d. 0.00076×9000

Exercise 4

1. Find:
 a. 10×0.6 b. 3.05×10 c. 10×0.01
 d. 100×0.02 e. 0.91×100 f. 100×0.701
 g. 1000×0.02 h. 0.76×1000 i. 1000×0.079
2. Find:
 a. 50×0.6 b. 60×0.74
 c. 0.02×70 d. 90×0.064
3. Find:
 a. 500×0.05 b. 400×0.095
 c. 0.006×700 d. 0.0064×800
4. Find:
 a. 9000×0.003 b. 6000×0.0076
 c. 0.0005×9000 d. 0.00056×7000

Numeracy	1.2
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Exercise 1

1. Find:

- a. $5 + (-3)$ b. $8 + (-5)$ c. $2 + (-7)$
d. $-4 + (-1)$ e. $0 + (-7)$ f. $-6 + (-5)$
g. $4 - (-4)$ h. $-3 - (-3)$ i. $-9 - (-3)$

2. Write answers to the following:

- a. If the temperature in Glasgow fell from 3°C to -7°C in December, by how many degrees did the temperature fall?
- b. If the temperature in Rio de Janeiro on 13th December rose from -4°C to 23°C , by how many degrees did the temperature rise?
- c. If Simon Ben Hadad lived from 21BC to 35AD, for how many years did he live?

Exercise 2

1. Find:

- a. $10 + (-7)$ b. $8 + (-12)$ c. $5 + (-10)$
d. $-11 + (-8)$ e. $0 + (-25)$ f. $-17 + (-13)$
g. $24 - (-4)$ h. $-17 - (-8)$ i. $-11 - (-15)$

2. Write answers to the following:

- a. If the temperature in Edinburgh rose from -2°C to 5°C on 19th January, by how many degrees did the temperature rise?
- b. If the temperature in Buenos Aires on 3rd December, fell from 2°C to -13°C , by how many degrees did the temperature fall?
- c. If Gaius lived from 17BC to 44AD, for how many years did he live?

Exercise 3

1. Find:

- a. $25 + (-17)$ b. $54 + (-88)$ c. $134 + (-410)$
d. $-83 + (-36)$ e. $-58 + (-37)$ f. $-84 + (-213)$
g. $44 - (-89)$ h. $-70 - (-68)$ i. $-342 - (-163)$

2. Write answers to the following:

- a. If the temperature in Dundee fell from 8°C to -5°C on 11th December, by how many degrees did the temperature fall?
- b. If the temperature in Lisbon rose on 12th December, from -3°C to 16°C , by how many degrees did the temperature rise?
- c. If Stephanus lived from 26BC to 42AD, for how many years did he live?

Exercise 4

1. Find:

- a. $43 + (-53)$ b. $84 + (-115)$ c. $267 + (-790)$
d. $-96 + (-98)$ e. $-21 + (-53)$ f. $-605 + (-89)$
g. $37 - (-84)$ h. $-53 - (-78)$ i. $-985 - (-73)$

2. Write answers to the following:

- a. If the temperature in Inverness fell from 4°C to -14°C on 11th December, by how many degrees did the temperature fall?
- b. If the temperature in Tallin rose on 12th December, from -7°C to 18°C , by how many degrees did the temperature rise?
- c. If Alexander lived from 27BC to 34AD, for how many years did he live?

Exercise 1

1. Find:

- a. $54 \div 10$ b. $54 \div 60$
c. $124 \div 100$ d. $124 \div 400$
e. $4860 \div 1000$ f. $4860 \div 6000$

2. Find:

- a. $6 \cdot 8 - 1 \cdot 34$ b. $12 \cdot 72 + 3 \cdot 96$
c. $8 \times 0 \cdot 67$ d. $14 \cdot 84 \times 7$
e. $15 \cdot 78 \div 3$ f. $52 \cdot 72 \div 8$

3. Round each value to the following number of decimal places (i) 1 (ii) 2 (iii) 3

- a. 6·8503 b. 9·7049 c. 19·9806

Exercise 2

1. Find:

- a. $66 \div 10$ b. $66 \div 60$
c. $156 \div 100$ d. $156 \div 300$
e. $5490 \div 1000$ f. $5490 \div 9000$

2. Find:

- a. $8 - 4 \cdot 33$ b. $24 \cdot 72 + 33 \cdot 6$
c. $8 \times 8 \cdot 04$ d. $16 \cdot 93 \times 5$
e. $16 \cdot 95 \div 5$ f. $75 \cdot 56 \div 4$

3. Round each value to the following number of decimal places (i) 1 (ii) 2 (iii) 3

- a. 0·0709 b. 3·0087 c. 29·9989

Exercise 3

1. Find:

- a. $6 \div 10$ b. $6 \div 60$
c. $15 \div 100$ d. $15 \div 300$
e. $540 \div 1000$ f. $540 \div 9000$

2. Find:

- a. $8 \cdot 4 - 5 \cdot 78$ b. $56 \cdot 9 + 64 \cdot 68$
c. $4 \times 13 \cdot 96$ d. $246 \cdot 03 \times 6$
e. $298 \cdot 83 \div 7$ f. $1487 \cdot 5 \div 7$

3. Round each value to the following number of decimal places (i) 1 (ii) 2 (iii) 3

- a. 2·0745 b. 17·50608 c. 99·9999

Exercise 4

1. Find:

- a. $0.8 \div 10$ b. $0.8 \div 20$
c. $15.6 \div 100$ d. $15.6 \div 300$
e. $54.60 \div 6000$ f. $54.60 \div 6000$

2. Find:

- a. $18 \cdot 11 - 9 \cdot 86$ b. $626 \cdot 07 + 34 \cdot 93$
c. $4 \times 19 \cdot 65$ d. $574 \cdot 93 \times 7$
e. $522 \cdot 16 \div 8$ f. $3169 \cdot 44 \div 6$

3. Round each value to the following number of decimal places (i) 1 (ii) 2 (iii) 3

- a. 299·9009 b. 0·99999 c. 999·9999

Exercise 1

1. Change the following fractions to (i) decimals (2 decimal places) and (ii) percentages:

a. $\frac{3}{7}$ b. $\frac{9}{13}$ c. $\frac{5}{6}$

d. $\frac{21}{23}$ e. $\frac{33}{37}$ f. $\frac{87}{99}$

2. Alistair sat three tests. He scored the following:

Physics	34 out of 55
Mathematics	28 out of 42
Chemistry	16 out of 24

In which test did he perform best? (justify your answer)

Exercise 2

1. Change the following fractions to (i) decimals (2 decimal places) and (ii) percentages:

a. $\frac{11}{14}$ b. $\frac{12}{17}$ c. $\frac{18}{19}$

d. $\frac{23}{27}$ e. $\frac{35}{38}$ f. $\frac{71}{99}$

2. Katie sat three tests. She scored the following:

English	56 out of 84
Mathematics	43 out of 77
Technical	33 out of 56

In which test did she perform best? (justify your answer)

Exercise 3

1. Change the following fractions to (i) decimals (2 decimal places) and (ii) percentages:

a. $\frac{42}{55}$ b. $\frac{23}{49}$ c. $\frac{7}{43}$

d. $\frac{4}{27}$ e. $\frac{3}{34}$ f. $\frac{8}{99}$

2. A pub quiz team scored the following in each round:

Pop Culture	11 out of 13
Politics	13 out of 16
80s Music	21 out of 24

In which category did they perform best? (justify your answer)

Exercise 4

1. Change the following fractions to (i) decimals (2 decimal places) and (ii) percentages:

a. $\frac{3}{47}$ b. $\frac{8}{75}$ c. $\frac{5}{65}$

d. $\frac{7}{146}$ e. $\frac{42}{375}$ f. $\frac{101}{95}$

2. A pub quiz team scored the following in each round:

Sport	25 out of 31
Science	32 out of 37
Cinema	41 out of 48

In which category did they perform best? (justify your answer)

Exercise 1

1. Simplify the following:

a. $\frac{6}{8}$ b. $\frac{3}{12}$ c. $\frac{5}{10}$

d. $\frac{3}{15}$ e. $\frac{5}{20}$ f. $\frac{6}{9}$

2. Find:

a. $\frac{1}{8}$ of 24 b. $\frac{1}{4}$ of 32 c. $\frac{1}{5}$ of 35

d. $\frac{3}{4}$ of 16 e. $\frac{2}{3}$ of 36 f. $\frac{3}{9}$ of 36

3. In a school of 1200, $\frac{3}{4}$ of the students are boys. How many girls are in the school?

Exercise 2

1. Simplify the following:

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

d. $\frac{10}{12}$ e. $\frac{12}{16}$ f. $\frac{16}{20}$

2. Find:

a. $\frac{1}{3}$ of 27 b. $\frac{1}{4}$ of 20 c. $\frac{1}{6}$ of 36

d. $\frac{3}{5}$ of 30 e. $\frac{7}{8}$ of 32 f. $\frac{8}{9}$ of 72

3. In a school of 1400, $\frac{7}{10}$ of the students are girls. How many boys are in the school?

Exercise 3

1. Simplify the following:

a. $\frac{10}{14}$ b. $\frac{16}{24}$ c. $\frac{20}{24}$

d. $\frac{18}{36}$ e. $\frac{24}{32}$ f. $\frac{77}{99}$

2. Find:

a. $\frac{1}{9}$ of 45 b. $\frac{1}{4}$ of 48 c. $\frac{1}{12}$ of 72

d. $\frac{3}{5}$ of 75 e. $\frac{2}{3}$ of 93 f. $\frac{7}{12}$ of 84

3. In a school of 2451, $\frac{2}{3}$ of the students are boys. How many girls are in the school?

Exercise 4

1. Simplify the following:

a. $\frac{15}{25}$ b. $\frac{28}{32}$ c. $\frac{24}{36}$

d. $\frac{45}{63}$ e. $\frac{48}{64}$ f. $\frac{110}{132}$

2. Find:

a. $\frac{1}{8}$ of 96 b. $\frac{1}{5}$ of 125 c. $\frac{1}{9}$ of 819

d. $\frac{3}{4}$ of 168 e. $\frac{2}{3}$ of 357 f. $\frac{11}{12}$ of 1440

3. In a school of 1175, $\frac{2}{5}$ of the students are girls. How many boys are in the school?

Exercise 1

1. Express the following as percentages:

- a. $\frac{1}{2}$ b. $\frac{1}{3}$ c. $\frac{1}{4}$
- d. $\frac{1}{5}$ e. $\frac{1}{10}$ f. $\frac{1}{100}$

2. Find:

- a. 50% of 20 b. 10% of 30
c. 20% of 40 d. 25% of 44
e. 5% of 20 f. $33\frac{1}{3}\%$ of 60
g. 75% of 24 h. 1% of 100

3. Express each as a fraction and simplify:

- a. 70% b. 40% c. 6%

Exercise 2

1. Express the following as percentages:

- a. $\frac{2}{3}$ b. $\frac{3}{4}$ c. $\frac{2}{5}$
- d. $\frac{3}{100}$ e. $\frac{1}{50}$ f. $\frac{2}{25}$

2. Find:

- a. 50% of 210 b. 10% of 390
c. 20% of 480 d. 20% of 3250
e. 5% of 680 f. $33\frac{1}{3}\%$ of 369
g. 75% of 464 h. 1% of 120

3. Express each as a fraction and simplify:

- a. 80% b. 26% c. 14%

Exercise 3

1. Express the following as percentages:

- a. $\frac{4}{5}$ b. $\frac{7}{10}$ c. $\frac{9}{20}$
- d. $\frac{11}{100}$ e. $\frac{9}{50}$ f. $\frac{17}{25}$

2. Find:

- a. 60% of 20 b. 70% of 50
c. 80% of 40 d. $66\frac{2}{3}\%$ of 42
e. 3% of 600 f. 7% of 100
g. 6% of 150 h. 8% of 130

3. Express each as a fraction and simplify:

- a. 85% b. 28% c. $2\cdot5\%$

Exercise 4

1. Express the following as percentages:

- a. $\frac{13}{20}$ b. $\frac{9}{10}$ c. $\frac{9}{25}$
- d. $\frac{17}{25}$ e. $\frac{24}{40}$ f. $\frac{42}{75}$

2. Find:

- a. 90% of 120 b. 40% of 350
c. 80% of 650 d. $66\frac{2}{3}\%$ of 357
e. 4% of 1300 f. 2% of 2200
g. 7% of 250 h. 3% of 470

3. Express each as a fraction and simplify:

4. a. 95% b. 64% c. $12\cdot5\%$

Exercise 1

- Find:
 - 27% of 210
 - 13% of 48
 - 55% of 75
 - 82% of 689
 - 11% of 325
 - 47% of 670
 - 79% of 243
 - 17% of 420
- Cheryl invested £3400 in a savings account with an interest rate of 4% per annum. Calculate:
 - Her interest after 1 year.
 - The total amount in her account after 1 year.
- Peter bought a TV set from Saturn Electrics. The cost was £1500 + VAT (20%). Calculate:
 - The cost of VAT.
 - The total cost of the TV.

Exercise 2

- Find:
 - 26% of 180
 - 17% of 890
 - 46% of 325
 - 97% of 957
 - 21% of 1205
 - 83% of 6812
 - 2·7% of 650
 - 6·5% of 960
- Esther invested £5600 in a savings account with an interest rate of 4·5% per annum. Calculate:
 - Her interest after 1 year.
 - The total amount in her account after 1 year.
- Alex bought a DVD player from Saturn Electrics. The cost was £1200 + VAT (20%). Calculate:
 - The cost of VAT.
 - The total cost of the TV.

Exercise 3

- Find:
 - 8% of 440
 - 16% of 890
 - 56% of 625
 - 87% of 257
 - 29% of 3215
 - 86% of 4408
 - 17·8% of £650
 - 13·5% of £960
- Carol invested £4800 in a savings account with an interest rate of 3·7% per annum. Calculate:
 - Her interest after 1 year.
 - The total amount in her account after 1 year.
- Jay bought an iPhone from Saturn Electrics. The cost was £569 + VAT (20%). Calculate:
 - The cost of VAT.
 - The total cost of the iPhone.

Exercise 4

- Find:
 - 33% of 296
 - 49% of 902
 - 43% of 177
 - 52% of 885
 - 67% of 1785
 - 91% of 8123
 - 6·1% of \$570
 - 24·5% of \$8820
- Alexa invested £12500 in a savings account with an interest rate of 7·8% per annum. Calculate:
 - Her interest after 1 year.
 - The total amount in her account after 1 year.
- Fran bought a laptop from Saturn Electrics. The cost was £1150 + VAT (20%). Calculate:
 - The cost of VAT.
 - The total cost of the laptop.

<p>Exercise 1</p> <p>1. Find:</p> <p>a. 34% of £450 b. 76% of £870 c. 8% of £9430 d. 16% of \$1740 e. 12·7% of €5670 e. 63·4% of €947</p> <p>2. Bill buys a house for £145,000. After 3 years, it increases in value by 9%. How much is the house worth after 3 years?</p> <p>3. Katrina buys a car for £7800. After the first year it depreciates in value by 13%. Calculate the value of the car at the end of the year.</p> <p>4. In his work as an accountant, Craig earned £35,000 per annum in 2013. In 2014 he was awarded a 7% increase. How much did he earn in 2014?</p>	<p>Exercise 2</p> <p>1. Find:</p> <p>a. 28% of \$380 b. 55% of £850 c. 13% of £6570 d. 49% of \$9140 e. 17·9% of €9470 e. 45·8% of €672</p> <p>2. Peter buys a house for £178,000. After 4 years, it increases in value by 18%. How much is the house worth after 4 years?</p> <p>3. Jenny buys a car for £10400. After the first year it depreciates in value by 27%. Calculate the value of the car at the end of the year.</p> <p>4. In his work as an actuary, Brian earned £75,000 per annum in 2013. In 2014 he was awarded a 12% increase. How much did he earn in 2014?</p>
<p>Exercise 3</p> <p>1. Find:</p> <p>a. 3% of £455 b. 8% of £563 c. 102% of \$5611 d. 110% of €3299 e. 22·3% of \$4584 e. 1·85% of £1023</p> <p>2. A hairdresser increased his shop's annual turnover in 2008 by 28%. If his turnover in 2007 was £45,560, what was his turnover in 2008?</p> <p>3. The CD Music Store recorded a 36·5% loss in profits during 2011. If the profits of The CD Music Store were £28,955 in 2010, what were the profits in 2011?</p> <p>4. After making some investments, a businessman saw his net worth increase by 8% from €2·7m. What was his new net worth?</p>	<p>Exercise 4</p> <p>1. Find:</p> <p>a. 18% of £35 b. 33% of £97 c. 101% of \$1122 d. 103% of €3994 e. 50·7% of \$564 e. 2·65% of £1530</p> <p>2. After 5 years, a collector saw his antique vase appreciate in value from £2500 by 8·5%. Calculate the value of his vase after 5 years.</p> <p>3. A car dealer saw his stock depreciate in value by 14·5% during 2012. If the value of his stock was £245,600 by the end of 2011, what was the value by the end of 2012?</p> <p>4. After making some investments, a businessman saw his net worth fall by 47·2% from €5·8m. What was his new net worth?</p>

Numeracy	1.2
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<p>Exercise 1</p> <p>1. Simplify the following ratios: a. 6:8 b. 10:12 c. 9:12 d. 4:6 e. 11:22 f. 20:24</p> <p>2. Robert and Andrew win money in a quiz and agree to share their prize in the ratio 3:2 respectively. If Robert gets £1650, calculate how much Andrew receives.</p> <p>3. Share £1600 in the ratio 1:3.</p> <p>4. A farmer decides to share his 1200kg of silage among his cows and sheep. The ratio of cows to sheep is 1:5. The cows receive 240kg. Is this a fair allocation? Justify your answer.</p>	<p>Exercise 2</p> <p>1. Simplify the following ratios: a. 6:9 b. 15:18 c. 10:12 d. 14:16 e. 18:24 f. 24:36</p> <p>2. Jane and Grace inherit money in a will and are instructed to share in the ratio 3:1 respectively. If Jane gets £630, calculate how much Grace receives.</p> <p>3. Share £1855 in the ratio 4:1.</p> <p>4. A farmer decides to share his 8547kg of silage among his goats and sheep. The ratio of cows to sheep is 2:5. The goats receive 1221kg. Is this a fair allocation? Justify your answer.</p>
<p>Exercise 3</p> <p>1. Simplify the following ratios: a. 14:18 b. 25:35 c. 12:6 d. 18:3 e. 32:24 f. 48:32</p> <p>2. Alex and Carmen share their business profits in the ratio 4:5 respectively. If Carmen earns £128750 in 2013, calculate how much Alex earns in the same year.</p> <p>3. Share £132000 in the ratio 3:8.</p> <p>4. A King decides to share 1750kg of gold among his court subjects. The ratio of servants to entertainers is 9:1. The servants receive 1605kg. Is this a fair allocation? Justify your answer.</p>	<p>Exercise 4</p> <p>1. Simplify the following ratios: a. 45:60 b. 72:63 c. 48:16 d. 28:49 e. 55:60 f. 144:132</p> <p>2. Will and Phoebe win sweets in a raffle and agree to share their prize in the ratio 3:2 respectively. If will gets 600g, calculate how much Phoebe receives.</p> <p>3. Share £144,000 in the ratio 7:5.</p> <p>4. A benefactor decides to share £1.8m between two communities in a town. The ratio of citizens in community A to community B is 5:7. Community A receives £750,000. Is this a fair allocation? Justify your answer.</p>

Applications	
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<p>Exercise 1</p> <ol style="list-style-type: none">1. There are 85 toffees in 5 boxes. Calculate the number of toffees per box.2. A car travels 245 miles with 7 gallons of diesel. Calculate the number of miles per gallon.3. John hires a car for 9 days for a total cost of £252. How much does the hire cost for 5 days?4. A total of 15 identical, full coaches can take 735 football fans to an away game. How many fans could travel on 11 coaches?5. If the exchange rate is \$1.65 per pound, calculate how many dollars you get for: a. £150 b. £255 c. £3500	<p>Exercise 2</p> <ol style="list-style-type: none">1. There are 208 cigars in 26 boxes. Calculate the number of cigars per box.2. A motorbike travels 211 miles with 4 gallons of petrol. Calculate the number of miles per gallon.3. John hires a windsurfing board for 8 days for a total cost of £144. How much does the hire cost for 5 days?4. A total of 16 mechanical diggers can move 28000kg of sand in 1 hour. How much sand could 13 diggers move in 1 hour?5. If the exchange rate is €1.22 per pound, calculate how many Euros you get for: a. £130 b. £275 c. £5300
<p>Exercise 3</p> <ol style="list-style-type: none">1. There are 168 candles in 7 boxes. How many candles are in 15 boxes.2. Places on a school trip are limited, so two classes are allocated a set number of tickets for the trip. Class 3A has 32 students and gets 25 tickets. Class 3B has 29 students and gets 22 tickets. In which class does any one student have the best chance of getting a ticket? Justify your answer.3. Angela gets €1989 for £1700 at her local post office. How many euros would she get for £1500?4. If the exchange rate is \$1.65 per pound, calculate how many pounds would you get back if you exchanged: a. \$450 b. \$166 c. £2450	<p>Exercise 4</p> <ol style="list-style-type: none">1. Fourteen crates can hold 294 chickens. How many chickens can 19 crates hold?2. Places on a football tour are limited, so two supporters clubs are allocated a set number of tickets for the tour. Club A has 52 members and gets 35 tickets. Club B has 64 members and gets 40 tickets. In which club does any one member have the best chance of getting a ticket? Justify your answer.3. Owen gets \$2236 for £1300 at his local foreign exchange. How many dollars would he get for £2000?4. If the exchange rate is €1.18 per pound, calculate how many pounds would you get back if you exchanged: a. €530 b. €66 c. €3122

Numeracy	1.2
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<p>Exercise 1</p> <p>1. Round the following to (i) 1 (ii) 2 and (iii) 3 significant figures: a. 4•3507 b. 16•085 c. 399•46</p> <p>2. Round the following to (i) 1 (ii) 2 and (iii) 3 significant figures: a. 0•06713 b. 0•008598 c. 0•01045</p> <p>3. How many significant figures appear in the following numbers? a. 34000 b. 104 c. 0•055</p> <p>4. Find the answer to each calculation to (i) 1 & (ii) 2 significant figures: a. 45×75 b. $0•856 \times 0•79$ c. $798 \div 542$ d. $76 \div 0•68$</p>	<p>Exercise 2</p> <p>1. Round the following to (i) 1 (ii) 2 and (iii) 3 significant figures: a. 55•306 b. 20•751 c. 309•46</p> <p>2. Round the following to (i) 1 (ii) 2 and (iii) 3 significant figures: a. 0•0205 b. 0•010508 c. 0•004508</p> <p>3. How many significant figures appear in the following numbers? a. 34700 b. 10•6 c. 0•00101</p> <p>4. Find the answer to each calculation to (i) 1 & (ii) 2 significant figures: a. 87×33 b. $0•917 \times 0•11$ c. $573 \div 990$ d. $120 \div 1•68$</p>
<p>Exercise 3</p> <p>1. Round the following to (i) 1 (ii) 2 and (iii) 3 significant figures: a. 1•975 b. 29•95 c. 99•96</p> <p>2. Round the following to (i) 1 (ii) 2 and (iii) 3 significant figures: a. 0•02738 b. 0•200898 c. 0•0004583</p> <p>3. How many significant figures appear in the following numbers? a. 4790 b. 200 c. 0•005</p> <p>4. Find the answer to each calculation to (i) 1 & (ii) 2 significant figures: a. 66×66 b. $0•888 \times 0•784$ c. $453 \div 682$ d. $13 \div 0•55$</p>	<p>Exercise 4</p> <p>1. Round the following to (i) 1 (ii) 2 and (iii) 3 significant figures: a. 9•958 b. 25•045 c. 369•56</p> <p>2. Round the following to (i) 1 (ii) 2 and (iii) 3 significant figures: a. 0•007513 b. 0•003108 c. 0•10085</p> <p>3. How many significant figures appear in the following numbers? a. 1244 b. 3•6 c. 0•00005</p> <p>4. Find the answer to each calculation to (i) 1 & (ii) 2 significant figures: a. 20×95 b. $0•812 \times 0•49$ c. $330 \div 729$ d. $15 \div 0•98$</p>

Numeracy	1•2
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Exercise 1

1. If a film begins at 1130 and ends at 1335, how long did it last?
2. If a train departs from Edinburgh at 2:35pm and arrives in Glasgow at 3:35pm, how long did the journey take?
3. A plane departs from New York at 2345 (UK time) and arrives in London at 0725, how long did the journey take?

4. Copy and complete the following train timetable:

Departure	Arrival	Time taken
0945		1hr 40mins
	1310	2hrs 35mins
1450	1625	

Exercise 2

1. If a film begins at 8:30pm and ends at 10:05pm, how long did it last?
2. If a train departs from Manchester at 1420 and arrives in London at 1910, how long did the journey take?
3. A plane departs from Los Angeles at 2345 (US time) and arrives in Chicago at 0430, how long did the journey take?

4. Copy and complete the following train timetable:

Departure	Arrival	Time taken
1140	1320	
1250	1525	
	1645	2hrs 55mins

Exercise 3

1. If a film begins at 1805 and ends at 2055, how long did it last?
2. If a train departs from Aberdeen at 2345 and arrives in London at 0905, how long did the journey take?
3. A plane departs from Belfast at 11:50pm and arrives in London at 1:20am. How long did the journey take?

4. Copy and complete the following train timetable:

Departure	Arrival	Time taken
2140	0015	
	2310	35mins
2330		2hrs 20mins

Exercise 4

1. If a film begins at 1030 and ends at 1305, how long did it last?
2. If a train departs from Paisley at 4:35pm and arrives in Largs at 5:20pm, how long did the journey take?
3. A plane departs from Hong Kong at 2045 (UK time) and arrives in London at 0815. How long did the journey take?

4. Copy and complete the following train timetable:

Departure	Arrival	Time taken
1625	1810	
	1910	3hrs 15mins
1715		4hrs 55mins

<p>Exercise 1</p> <ol style="list-style-type: none"> Calculate the distance when time and speed are given (round to nearest whole number): <ol style="list-style-type: none"> T = 3hrs S = 45mph T = 7.5hrs S = 80km/h T = 15 seconds S = 25metres/s T = 1min 20s S = 2m/s T = 9.5hrs S = 260mph A plane travels for 7 hours at an average speed of 330mph. Calculate the distance covered. Mark and Barry are joggers. One Saturday, Mark jogged for 2.5 hours at an average speed of 8mph while Barry jogged for 3.2 hours at an average speed of 6mph. Who jogged the furthest? 	<p>Exercise 2</p> <ol style="list-style-type: none"> Calculate the speed when distance and time are given (round to nearest whole number): <ol style="list-style-type: none"> D = 120km T = 3hrs D = 100m T = 10.15s D = 187miles T = 2.5hrs D = 800m T = 1min 45s D = 3500m T = 10.5hrs A coach travels for 400 miles in 7.5 hours. What is the average speed of the coach? Mark and Barry are joggers. One Saturday, Mark jogged for 25 miles in 2.7 hours while Barry jogged 15 miles in 1.5 hours. Which of the joggers had the fastest average speed?
<p>Exercise 3</p> <ol style="list-style-type: none"> Calculate the time when distance and speed are given (round to 1 decimal place): <ol style="list-style-type: none"> D = 270miles S = 45mph D = 1500m S = 4m/s D = 700km S = 110km/h D = 27miles S = 4mph D = 3000miles S = 280mph A plane travels for 3500 miles at an average speed of 330 mph. Calculate the journey time. Mark and Barry are joggers. One Saturday, Mark jogged 26 miles at an average speed of 7mph while Barry jogged 24 miles at an average speed of 5mph. Calculate the time taken for each jogger. 	<p>Exercise 4</p> <ol style="list-style-type: none"> Calculate either time distance or speed when the other two are given (round to 1 decimal place): <ol style="list-style-type: none"> D = 250miles T = 3.5hrs D = 3400km S = 450km/h T = 2.7hrs S = 160km/h S = 44mph T = 3.2hrs S = 390mph D = 3250miles A car travels for 3 hours at an average speed of 65km/h. How far does the car travel in this time? Mark and Barry are joggers. One Saturday, Mark jogged 15 miles in 1.75 hours while Barry jogged 12 miles in 1.45 hours. Who had the greater speed?

Numeracy	1.2
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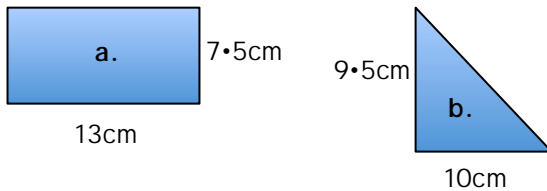
<p>Exercise 1</p> <p>1. Change the following times to hours and minutes: a. 0.5hrs b. 0.75hrs c. 0.25hrs d. 1.2hrs e. 2.1hrs f. 10.5hrs</p> <p>2. Change the following times to hours: a. 15mins b. 20mins c. 45mins d. 1hr 30mins e. 3hrs 25mins f. 6hrs 2mins</p> <p>3. A car travels 44 miles in 45 minutes. Calculate the average speed of the car.</p> <p>4. A bus travels 20 miles in 30 minutes. Calculate the average speed of the bus</p>	<p>Exercise 2</p> <p>1. Change the following times to hours and minutes: a. 3.75hrs b. 14.5hrs c. 7.2hrs d. 1.8hrs e. 13.4hrs f. 11.6hrs</p> <p>2. Change the following times to hours (round to 2 decimal places when necessary): a. 5hrs 45mins b. 3hrs 12mins c. 6hrs 25mins d. 1hr 15mins e. 7hrs 20mins f. 8hrs 40mins</p> <p>3. A car travels at a constant speed of 56mph for 15 minutes. Calculate the distance covered in that time.</p> <p>4. A bus travels at a constant speed of 56km/h for 12 minutes. Calculate the distance covered in that time.</p>
<p>Exercise 3</p> <p>1. Change the following times to hours and minutes: a. 6.75hrs b. 14.2hrs c. 5.25hrs d. 8.1hrs e. 21.9hrs f. 4.6hrs</p> <p>2. Change the following times to hours (round to 2 decimal places if necessary): a. 5hrs 15mins b. 9hrs 18mins c. 4hrs 35mins d. 7hr 54mins e. 2hrs 20mins f. 5hrs 42mins</p> <p>3. A car travels 145km at an average speed of 68km/h. Calculate the time taken in hours.</p> <p>4. A bus travels 50.4 miles at an average speed of 36mph. Calculate the time taken in hours and minutes.</p>	<p>Exercise 4</p> <p>4. Change the following times to hours and minutes: a. 5.2hrs b. 15.25hrs c. 8.5hrs d. 10.1hrs e. 22.75hrs f. 19.4hrs</p> <p>5. Change the following times to hours (round to 2 decimal places if necessary): a. 105mins b. 75mins c. 138mins d. 264mins e. 520mins f. 320mins</p> <p>6. A car travels at a constant speed of 85km/h for 15 minutes. Calculate the distance covered in that time.</p> <p>7. A bus travels 28 miles in 45 minutes. Calculate the average speed of the bus.</p>

Numeracy	1.2
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Exercise 1

- Calculate the (i) area and (ii) perimeter of a square of side length:
 - 3cm
 - 5km
 - 8mm
 - 13cm
 - 11m
 - 15cm
- Calculate the (i) area and (ii) perimeter of a rectangle with the length (L) and breadth (B) given as:
 - L = 2cm B = 5cm
 - L = 3km B = 12km
 - L = 12m B = 30m
 - L = 34mm B = 20mm

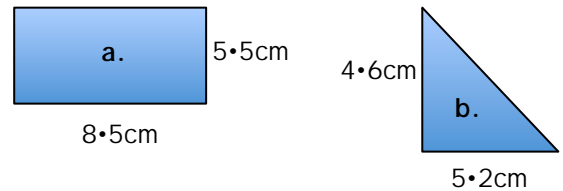
- Calculate the area of each shape:



Exercise 2

- Calculate the (i) area and (ii) perimeter of a square of side length:
 - 5cm
 - 18mm
 - 22m
 - 1.5cm
 - 14.15m
 - 20.05cm
- Calculate the (i) area and (ii) perimeter of a rectangle with the length (L) and breadth (B) given as:
 - L = 4cm B = 10cm
 - L = 8m B = 15m
 - L = 50mm B = 35mm
 - L = 75mm B = 24mm

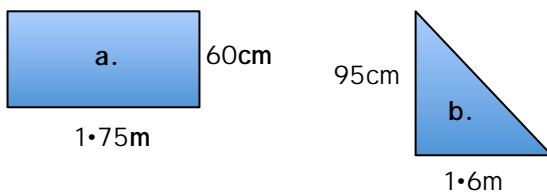
- Calculate the area of each shape:



Exercise 3

- Calculate the (i) area and (ii) perimeter of a square of side length:
 - 2.7cm
 - 5.9cm
 - 8.6mm
 - 10.25cm
 - 3.75m
 - 15.35cm
- Calculate the (i) area and (ii) perimeter of a rectangle with the length (L) and breadth (B) given as:
 - L = 9.5cm B = 8.4cm
 - L = 45mm B = 125mm
 - L = 12.8m B = 40.6m
 - L = 3.65m B = 20.15mm

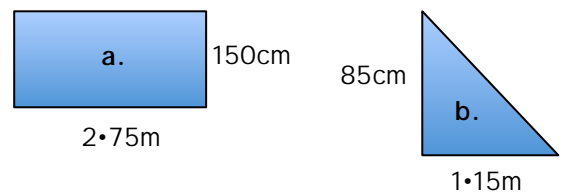
- Calculate the area of each shape:



Exercise 4

- Calculate the (i) area and (ii) perimeter of a square of side length:
 - 3.76cm
 - 5.44cm
 - 2.58m
 - 13.05cm
 - 21.88m
 - 17.89cm
- Calculate the (i) area and (ii) perimeter of a rectangle with the length (L) and breadth (B) given as:
 - L = 1m B = 75cm
 - L = 3km B = 2500m
 - L = 11m B = 850cm
 - L = 39mm B = 2.5cm

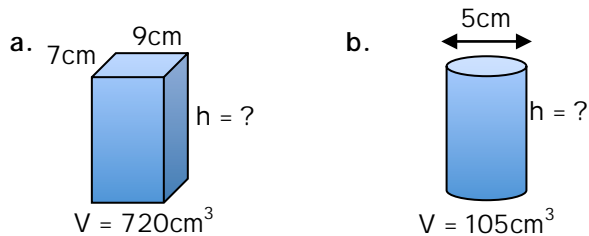
- Calculate the area of each shape:



Exercise 1

- Calculate the volume of a cube of side length:
 - 3cm
 - 5cm
 - 8mm
 - 13cm
 - 11m
 - 15cm
- Calculate the volume (to 1 d.p) of a cylinder with the radius (r) and height (h) given as:
 - r = 6cm h = 10cm
 - r = 3cm h = 12cm
 - r = 12m h = 30m
 - r = 16mm h = 28mm

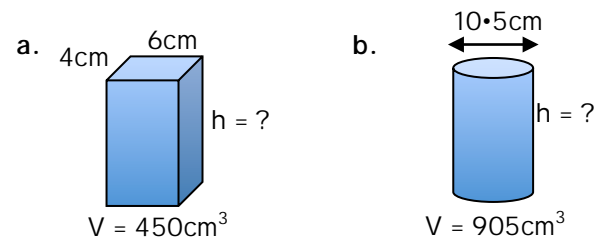
- Calculate the height (to 1.d.p) given the volume of each:



Exercise 2

- Calculate the volume of a cube of side length:
 - 6cm
 - 14cm
 - 26mm
 - 35cm
 - 41m
 - 22mm
- Calculate the volume (to 1 d.p) of a cuboid with the length (l), breadth (b) & height (h) given as:
 - l = 17cm b = 11cm h = 15cm
 - l = 14m b = 4m h = 7m
 - l = 8cm b = 7.5cm h = 20cm
 - l = 32mm b = 16mm h = 5.5mm

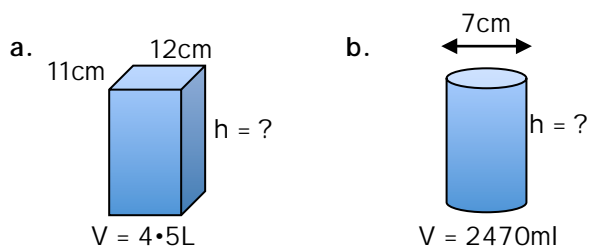
- Calculate the height (to 1.d.p) given the volume of each:



Exercise 3

- Calculate the volume of a cube of side length:
 - 10cm
 - 33cm
 - 56mm
 - 1.4cm
 - 5.7m
 - 9.5cm
- Calculate the volume (to 1 d.p) of a cylinder with the radius (r) and height (h) given as:
 - r = 3.5cm h = 12cm
 - r = 8.5cm h = 15cm
 - r = 6.5m h = 20.5m
 - r = 10.5mm h = 35mm

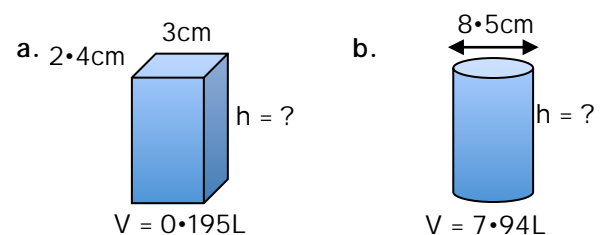
- Calculate the height (to 1.d.p) given the volume of each:



Exercise 4

- Calculate the volume of a cube of side length:
 - 77cm
 - 45cm
 - 90mm
 - 14.5cm
 - 29.5mm
 - 1.05m
- Calculate the volume (to 1 d.p) of a cuboid with the length (l), breadth (b) & height (h) given as:
 - l = 12.5cm b = 8.5cm h = 13cm
 - l = 15.5m b = 11m h = 17m
 - l = 8.8cm b = 5.3cm h = 12cm
 - l = 15mm b = 6.9mm h = 5.5mm

- Calculate the height (to 1.d.p) given the volume of each:



<p>Exercise 1</p> <ol style="list-style-type: none"> David works as an apprentice engineer. His gross annual salary is £18,500. If John receives a 6% pay rise, what will his new salary be? Samiya buys a new Bluetooth speaker, it costs £90 + VAT. VAT is charged at 20%, calculate the total cost of the speaker. Stephen buys a pair of shoes costing £60. The shop offer him a 5% student discount. How much does he pay? Chris pays £36 per month for his mobile phone. The company give him a 12% discount. How much does he now pay? Zahid receives £1400 per month as an office assistant. He is given a 5% pay rise. How much does he now earn? 	<p>Exercise 2</p> <ol style="list-style-type: none"> Mike works as an apprentice engineer. His gross annual salary is £16,700. If John receives a 7% pay rise, what will his new salary be? Aria buys a new speaker, it costs £160 + VAT. VAT is charged at 20%, calculate the total cost of the speaker. Stephen buys a pair of shoes costing £80. The shop offer him a 7% student discount. How much does he pay? Ken pays £38 per month for his mobile phone. The company give him a 11% discount. How much does he now pay? Ali receives £1650 per month as an office assistant. He is given a 9% pay rise. How much does he now earn?
<p>Exercise 3</p> <ol style="list-style-type: none"> I an works as an apprentice engineer. His gross annual salary is £13,800. If John receives a 8% pay rise, what will his new salary be? Samiya buys a new wireless key board , it costs £100 + VAT. VAT is charged at 20%, calculate the total cost of the keyboard. Gillian buys a pair of shoes costing £160. The shop offer her a 15% student discount. How much does she pay? Chris pays £76 per month for his mobile phone. The company give him a 10% discount. How much does he now pay? Zahid receives £1660 per month as an office assistant. He is given a 7% pay rise. How much does he now earn? 	<p>Exercise 4</p> <ol style="list-style-type: none"> Daniel works as an apprentice engineer. His gross annual salary is £17,300. If John receives a 9% pay rise, what will his new salary be? Mobina buys a new Bluetooth speaker, it costs £76 + VAT. VAT is charged at 20%, calculate the total cost of the speaker. john buys a pair of shoes costing £77. The shop offer him a 6% student discount. How much does he pay? Zach pays £88 per month for his mobile phone. The company give him a 14% discount. How much does he now pay? Zahid receives £1600 per month as an office assistant. He is given a 15% pay rise. How much does he now earn?

Numeracy	Percentages
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<p>Exercise 1</p> <ol style="list-style-type: none">1. Suleman has saved up £300 for driving lessons. They cost £23 each. How many driving lessons can he afford?2. An empty bag weighs 14g. When packed with 12 packets of tissues it weighs 446g. Find the weight of 1 packet of tissues.3. Harris has saved up £280 for piano lessons. His lessons cost £25 per hour. How many lessons can he afford? How much will he have left over?4. An empty container weighs 120g, when packed with 14 chocolate bars it weighs 820g. Find the weight of 1 chocolate bar.5. Jennifer saves £400 for guitar lessons, she pays for 17 lessons and has £9 left over. How much does 1 lesson cost?	<p>Exercise 2</p> <ol style="list-style-type: none">1. Shiva has saved up £250 for driving lessons. They cost £25 each. How many driving lessons can she afford?2. An empty bag weighs 12g. When packed with 24 packets of tissues it weighs 426g. Find the weight of 1 packet of tissues.3. Harris has saved up £260 for piano lessons. His lessons cost £32 per hour. How many lessons can he afford? How much will he have left over?4. An empty container weighs 130g, when packed with 10 chocolate bars it weighs 840g. Find the weight of 1 chocolate bar.5. David saves £600 for guitar lessons, she pays for 18 lessons and has £8 left over. How much does 1 lesson cost?
<p>Exercise 3</p> <ol style="list-style-type: none">1. Ali has saved up £450 for driving lessons. They cost £22 each. How many driving lessons can he afford?2. An empty bag weighs 13g. When packed with 12 packets of tissues it weighs 245g. Find the weight of 1 packet of tissues.3. Harris has saved up £170 for piano lessons. His lessons cost £24 per hour. How many lessons can he afford? How much will he have left over?4. An empty container weighs 135g, when packed with 15 chocolate bars it weighs 910g. Find the weight of 1 chocolate bar.5. Mike saves £600 for guitar lessons, she pays for 19 lessons and has £8 left over. How much does 1 lesson cost?	<p>Exercise 4</p> <ol style="list-style-type: none">1. Suleman has saved up £760 for driving lessons. They cost £33 each. How many driving lessons can he afford?2. An empty bag weighs 19g. When packed with 11 packets of tissues it weighs 450g. Find the weight of 1 packet of tissues.3. Harris has saved up £385 for piano lessons. His lessons cost £30 per hour. How many lessons can he afford? How much will he have left over?4. An empty container weighs 160g, when packed with 16 chocolate bars it weighs 920g. Find the weight of 1 chocolate bar.5. Jennifer saves £550 for guitar lessons, she pays for 18 lessons and has £8 left over. How much does 1 lesson cost?

Numeracy	Subtraction / Division
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Exercise 1

1. Josh is going to Europe. The exchange rate is €1.15 to the pound. If he changes £250, how much currency will he get?
2. Shaun is going to the USA. The exchange rate is \$1.56 to the pound. How much currency will he get for £300?
3. Brook is going to Australia. The exchange rate is \$2.10 to the pound. If she changes £150, how much currency will she get?
4. Esha is going to Dubai. The exchange rate is 6.22 Dirham to the pound. If she changes £360, how much currency will she get?
5. Zain is going to Pakistan. The exchange rate is 167 Rupees to the pound. How much currency will he get for £230?

Exercise 2

1. Josh is going to Europe. The exchange rate is €1.25 to the pound. If he changes £400, how much currency will he get?
2. Shaun is going to the USA. The exchange rate is \$1.76 to the pound. How much currency will he get for £200?
3. Brook is going to Australia. The exchange rate is \$2.30 to the pound. If she changes £750, how much currency will she get?
4. Esha is going to Dubai. The exchange rate is 8.02 Dirham to the pound. If she changes £260, how much currency will she get?
5. Zain is going to Pakistan. The exchange rate is 158 Rupees to the pound. How much currency will he get for £130?

Exercise 3

1. Josh is going to Europe. The exchange rate is €1.05 to the pound. If he changes £450, how much currency will he get?
2. Shaun is going to the USA. The exchange rate is \$1.66 to the pound. How much currency will he get for £800?
3. Brook is going to Australia. The exchange rate is \$2.15 to the pound. If she changes £160, how much currency will she get?
4. Esha is going to Dubai. The exchange rate is 6.00 Dirham to the pound. If she changes £465, how much currency will she get?
5. Zain is going to Pakistan. The exchange rate is 177 Rupees to the pound. How much currency will he get for £330?

Exercise 4

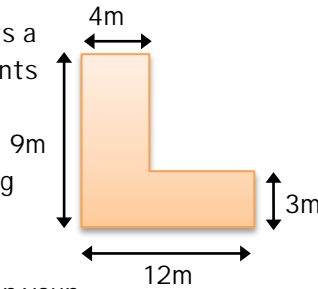
1. Josh is going to Europe. The exchange rate is €1.40 to the pound. If he changes £245, how much currency will he get?
2. Shaun is going to the USA. The exchange rate is \$1.76 to the pound. How much currency will he get for £660?
3. Brook is going to Australia. The exchange rate is \$2.30 to the pound. If she changes £700, how much currency will she get?
4. Esha is going to Dubai. The exchange rate is 6.42 Dirham to the pound. If she changes £760, how much currency will she get?
5. Zain is going to Pakistan. The exchange rate is 157 Rupees to the pound. How much currency will he get for £130?

Exercise 1

1. Complete the following table showing times of departure and arrival for different trains.

Departure	Arrival	Journey Time
0830	1040	
1115		2h 18 mins
	1340	3h 50mins

2. The diagram represents a hallway. The owner wants to put skirting board around all the walls. He buys ten 4m skirting boards. Does he buy enough? By showing working, give reason for your answer.

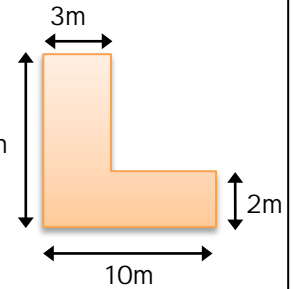


Exercise 2

1. Complete the following table showing times of departure and arrival for different trains.

Departure	Arrival	Journey Time
0930		2h 13 mins
1115	1245	
	1340	2h 40mins

2. The diagram represents a hallway. The owner wants to put a border around all the walls. He buys ten 3m border. Does he buy enough? By showing working, give reason for your answer.

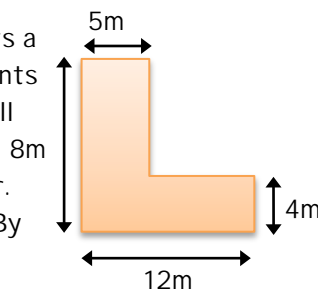


Exercise 3

1. Complete the following table showing times of departure and arrival for different trains.

Departure	Arrival	Journey Time
0730	1145	
1215		3h 17 mins
1345		3h 55mins

2. The diagram represents a hallway. The owner wants to put border around all the walls. He buys ten 8m border. Does he buy enough? By showing working, give reason for your answer.

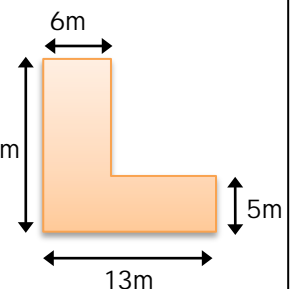


Exercise 4

1. Complete the following table showing times of departure and arrival for different trains.

Departure	Arrival	Journey Time
	1040	1h 23mins
	1235	2h 18 mins
0825		3h 50mins

2. The diagram represents a hallway. The owner wants to put a border around all the walls. He buys ten 11m border. Does he buy enough? By showing working, give reason for your answer.



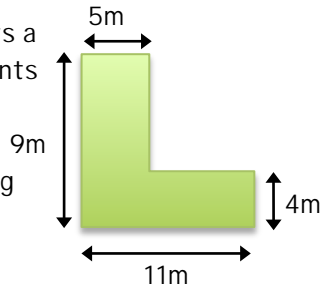
Numeracy	Timetables and Perimeter
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Exercise 1

1. Complete the following table showing times of departure and arrival for different trains.

Departure	Arrival	Journey Time
0925	1242	
1439		2h 17mins
	2115	3h 30mins

2. The diagram represents a hallway. The owner wants to put skirting board around all the walls. He buys ten 4m skirting boards. Does he buy enough? By showing working, give reason for your answer.

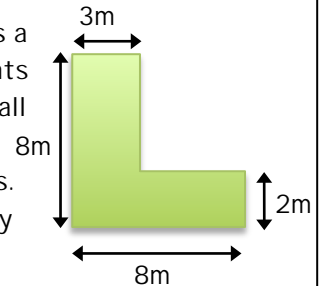


Exercise 2

1. Complete the following table showing times of departure and arrival for different trains.

Departure	Arrival	Journey Time
0445		4h 17mins
1315	1547	
	1740	4h 55mins

2. The diagram represents a hallway. The owner wants to put a border around all the walls. He buys ten 3m borders. Does he buy enough? By showing working, give reason for your answer.

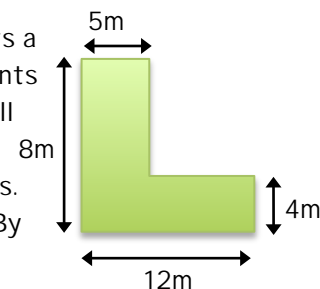


Exercise 3

1. Complete the following table showing times of departure and arrival for different trains.

Departure	Arrival	Journey Time
0502	1145	
1210		5h 43mins
	1622	4h 35mins

2. The diagram represents a hallway. The owner wants to put border around all the walls. He buys six 8m borders. Does he buy enough? By showing working, give reason for your answer.

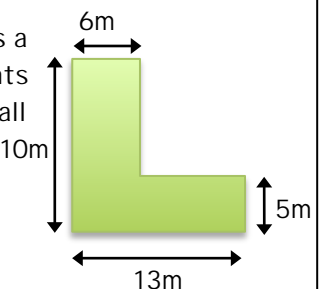


Exercise 4

1. Complete the following table showing times of departure and arrival for different trains.

Departure	Arrival	Journey Time
0143	0940	
	1135	4h 22mins
2235		3h 40mins

2. The diagram represents a hallway. The owner wants to put a border around all the walls. He buys four 10m borders. Does he buy enough? By showing working, give reason for your answer.



<p>Exercise 1</p> <ol style="list-style-type: none">1. A man runs at a constant speed of 12mph. How far does the man run in 45 minutes?2. A car travels at a constant speed of 55mph for 15 minutes. How far does the car travel in this time?3. A train travels at a constant speed of 120mph for 2 hours and 30 minutes. How far does it travel in this time?4. A plane flies 500 miles in 4 hours and 15 minutes. What speed does the plane fly?5. A man runs 26 miles in 2 hours and 20 minutes. How fast does the man run?6. A car travels 40mph for 4 hours and 30 minutes. How far does the car travel?	<p>Exercise 2</p> <ol style="list-style-type: none">1. A man runs at a constant speed of 8mph. How far does the man run in 45 minutes?2. A car travels at a constant speed of 96mph for 15 minutes. How far does the car travel in this time?3. A train travels at a constant speed of 150mph for 3 hours and 20 minutes. How far does it travel in this time?4. A plane flies 600 miles in 3 hours and 15 minutes. What speed does the plane fly?5. A man runs 36 miles in 4 hours and 30 minutes. How fast does the man run?6. A car travels 50mph for 5 hours and 15 minutes. How far does the car travel?
<p>Exercise 3</p> <ol style="list-style-type: none">1. A man runs at a constant speed of 10mph. How far does the man run in 45 minutes?2. A car travels at a constant speed of 70mph for 30 minutes. How far does the car travel in this time?3. A train travels at a constant speed of 180mph for 1 hours and 45 minutes. How far does it travel in this time?4. A plane flies 600 miles in 6 hours and 15 minutes. What speed does the plane fly?5. A man runs 37.5 miles in 3 hours and 45 minutes. How fast does the man run?6. A car travels 60mph for 3 hours and 30 minutes. How far does the car travel?	<p>Exercise 4</p> <ol style="list-style-type: none">1. A man runs at a constant speed of 6mph. How far does the man run in 45 minutes?2. A car travels at a constant speed of 80mph for 45 minutes. How far does the car travel in this time?3. A train travels at a constant speed of 176mph for 4 hours and 30 minutes. How far does it travel in this time?4. A plane flies 530 miles in 3 hours and 45 minutes. What speed does the plane fly?5. A man runs 45 miles in 1 hours and 15 minutes. How fast does the man run?6. A car travels 80 mph for 5 hours and 30 minutes. How far does the car travel?

Numeracy	Speed / Distance / Time
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Exercise 1

1. Two people are paid £200 to carry out a job. It is to be shared in the ratio 2:3. The first person is paid £75, is this amount correct? Justify your answer.
2. Two children are given 40 sweets by their grandmother and told to share them in the ratio 3:5. The first child is given 17 sweets, is this amount correct? Justify your answer.
3. When baking two different loaves of bread, the 810g of dough have to be divided in the ratio 4:5. If the first loaf has 360g, is this amount correct? Justify your answer.
4. A Principal teacher distributes 300 jotters between himself and a colleague in the ratio 2:3. If he gives his colleague 190 jotters, has he correctly distributed the jotters? Justify your answer.

Exercise 2

1. Two people are paid £400 to carry out a job. It is to be shared in the ratio 5:3. The first person is paid £240, is this amount correct? Justify your answer.
2. Two children are given 36 sweets by their grandmother and told to share them in the ratio 2:7. The first child is given 8 sweets, is this amount correct? Justify your answer.
3. When baking two different loaves of bread, the 540g of dough have to be divided in the ratio 4:2. If the first loaf has 400g, is this amount correct? Justify your answer.
4. A Principal teacher distributes 550 jotters between himself and a colleague in the ratio 7:4. If he gives his colleague 200 jotters, has he correctly distributed the jotters? Justify your answer.

Exercise 3

1. Two people are paid £500 to carry out a job. It is to be shared in the ratio 3:7. The first person is paid £150, is this amount correct? Justify your answer.
2. Two children are given 72 sweets by their grandmother and told to share them in the ratio 2:4. The first child is given 25 sweets, is this amount correct? Justify your answer.
3. When baking two different loaves of bread, the 330g of dough have to be divided in the ratio 8:3. If the first loaf has 240g, is this amount correct? Justify your answer.
4. A Principal teacher distributes 240 jotters between himself and a colleague in the ratio 5:3. If he gives his colleague 70 jotters, has he correctly distributed the jotters? Justify your answer.

Exercise 4

1. Two people are paid £1200 to carry out a job. It is to be shared in the ratio 7:5. The first person is paid £750, is this amount correct? Justify your answer.
2. Two children are given 160 sweets by their grandmother and told to share them in the ratio 11:9. The first child is given 88 sweets, is this amount correct? Justify your answer.
3. When baking two different loaves of bread, the 360g of dough have to be divided in the ratio 7:5. If the first loaf has 240g, is this amount correct? Justify your answer.
4. A Principal teacher distributes 2000 jotters between himself and a colleague in the ratio 21:19. If he gives his colleague 950 jotters, has he correctly distributed the jotters? Justify your answer.

Exercise 1

1. Find:

- a. $2 + (-5)$ b. $6 + (-2)$ c. $4 + (-8)$
d. $-3 + (-5)$ e. $0 + (-2)$ f. $-11 + (-4)$
g. $8 - (-8)$ h. $-2 - (-6)$ i. $-12 - (-6)$

2. Write answers to the following:

- a. A thermometer recorded that a substance changed from 4°C to -6°C . By how many degrees had the substance dropped?
- b. During an experiment, a metallic liquid increased in temperature from -17°C to 56°C . Find the temperature increase.
- c. A chemical element is cooled from 9°C to -15°C . Find the temperature difference.

Exercise 2

1. Find:

- a. $9 + (-1)$ b. $3 + (-10)$ c. $4 + (-7)$
d. $-13 + (-3)$ e. $0 + (-11)$ f. $-12 + (-14)$
g. $30 - (-5)$ h. $-16 - (-11)$ i. $-14 - (-20)$

2. Write answers to the following:

- a. The outside air temperature changed overnight from 6°C to -8°C . By how many degrees had the temperature dropped?
- b. During an experiment, a metallic liquid increased in temperature from -24°C to 82°C . Find the temperature increase.
- c. A radioactive material dropped 17°C from -8°C . Find the new temperature.

Exercise 3

1. Find:

- a. $50 + (-13)$ b. $82 + (-77)$ c. $140 + (-290)$
d. $-71 + (-32)$ e. $-26 + (-39)$ f. $-59 + (-184)$
g. $83 - (-90)$ h. $-60 - (-71)$ i. $-217 - (-890)$

2. Write answers to the following:

- a. A thermometer recorded that a substance changed from 2°C to -14°C . By how many degrees had the substance dropped?
- b. During an experiment, a metallic liquid increased in temperature from -51°C to -22°C . Find the temperature increase.
- c. A chemical element is cooled from 52°C to -24°C . Find the temperature difference.

Exercise 4

1. Find:

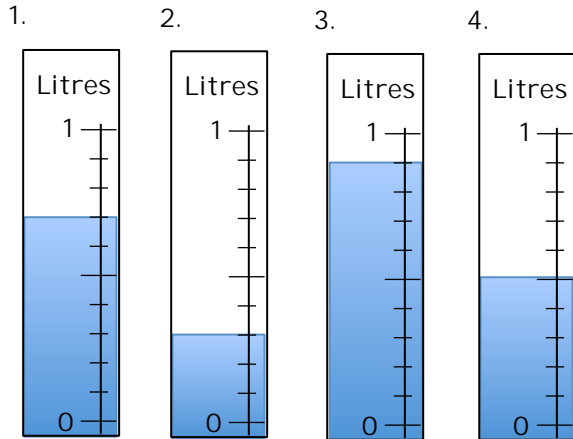
- a. $65 + (-19)$ b. $63 + (-69)$ c. $120 + (-650)$
d. $-34 + (-37)$ e. $-46 + (-34)$ f. $-12 + (-340)$
g. $17 - (-17)$ h. $-52 - (-70)$ i. $-125 - (-225)$

2. Write answers to the following:

- a. If outside air temperature changed overnight from -5°C to -22°C . By how many degrees had the temperature dropped?
- b. During an experiment, a metallic liquid increased in temperature from -72°C to -14°C . Find the temperature increase.
- c. A radioactive material dropped 21°C from -16°C . Find the new temperature.

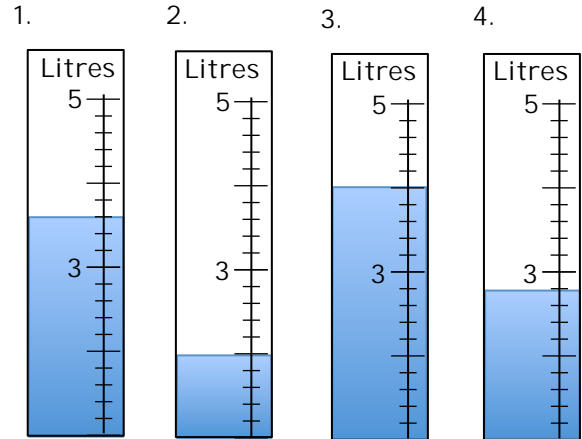
Exercise 1

Each diagram represents part of a measuring cylinder containing liquid, write down (a) the measurement (in Litres) of liquid and (b) how much more liquid is needed to fill the cylinder to 1 litre.



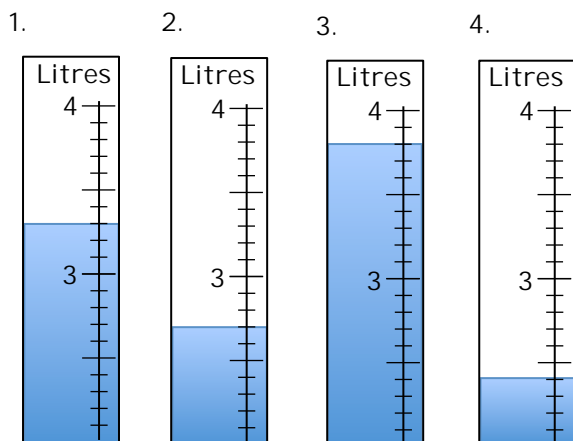
Exercise 2

Each diagram represents part of a measuring cylinder containing liquid, write down (a) the measurement (in Litres) of liquid and (b) how much more liquid is needed to fill the cylinder to 5 litres.



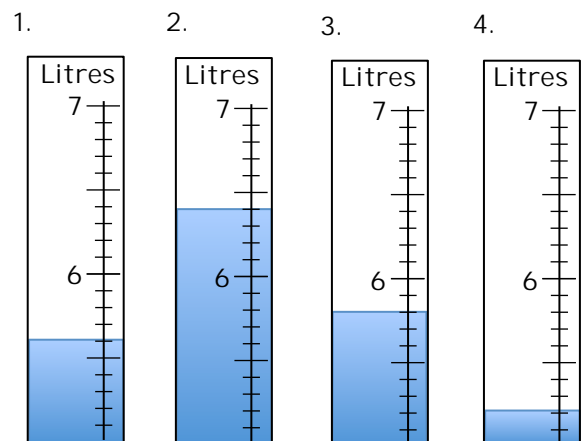
Exercise 3

Each diagram represents part of a measuring cylinder containing liquid, write down (a) the measurement (in Litres) of liquid and (b) how much more liquid is needed to fill the cylinder to 4 litres.



Exercise 4

Each diagram represents part of a measuring cylinder containing liquid, write down (a) the measurement (in Litres) of liquid and (b) how much more liquid is needed to fill the cylinder to 7 litres.



Numeracy

Measurement

Exercise 1

1. Pro Cars and First Motors are selling the same car with different deals.

<p>Pro Cars Deposit £3950 48 payments of £215</p>

<p>First Motors Deposit £2500 48 payments of £265</p>

Which dealer is offering the better deal and by how much?

2. Ski Solutions and Alpine Zone are offering a scheme to pay for the latest snowboard. They are offering the same board on different deals. Who is offering the cheaper deal?

<p>Ski Solutions Deposit £120 9 payments of £150</p>
--

<p>Alpine Zone Deposit £80 10 payments of £145</p>
--

Exercise 2

1. Pro Cars and First Motors are selling the same car with different deals.

<p>Pro Cars Deposit £8200 36 payments of £180</p>

<p>First Motors Deposit £1800 48 payments of £260</p>

Which dealer is offering the better deal and by how much?

2. Ski Solutions and Alpine Zone are offering a scheme to pay for the latest snowboard. They are offering the same board on different deals. Who is offering the cheaper deal?

<p>Ski Solutions Deposit £135 11 payments of £135</p>

<p>Alpine Zone Deposit £200 10 payments of £136</p>

Exercise 3

1. Pro Cars and First Motors are selling the same car with different deals.

<p>Pro Cars Deposit £4999 48 payments of £450</p>

<p>First Motors Deposit £6250 36 payments of £540</p>

Which dealer is offering the better deal and by how much?

2. Ski Solutions and Alpine Zone are offering a scheme to pay for the latest snowboard. They are offering the same board on different deals. Who is offering the cheaper deal?

<p>Ski Solutions Deposit £nil 14 payments of £122</p>

<p>Alpine Zone Deposit £360 6 payments of £220</p>
--

Exercise 4

1. Pro Cars and First Motors are selling the same car with different deals.

<p>Pro Cars Deposit £1999 48 payments of £475</p>

<p>First Motors Deposit £10000 48 payments of £275</p>
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Which dealer is offering the better deal and by how much?

2. Ski Solutions and Alpine Zone are offering a scheme to pay for the latest snowboard. They are offering the same board on different deals. Who is offering the cheaper deal?

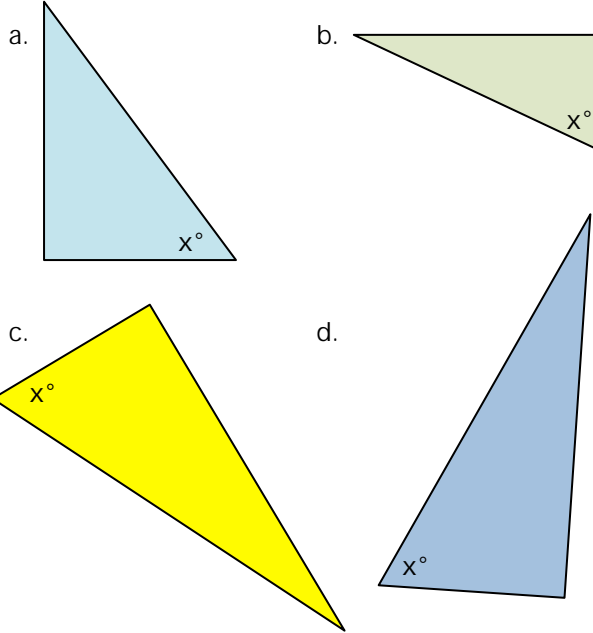
<p>Ski Solutions Deposit £310 11 payments of £126</p>

<p>Alpine Zone Deposit £405 11 payments of £112</p>

Numeracy	Money
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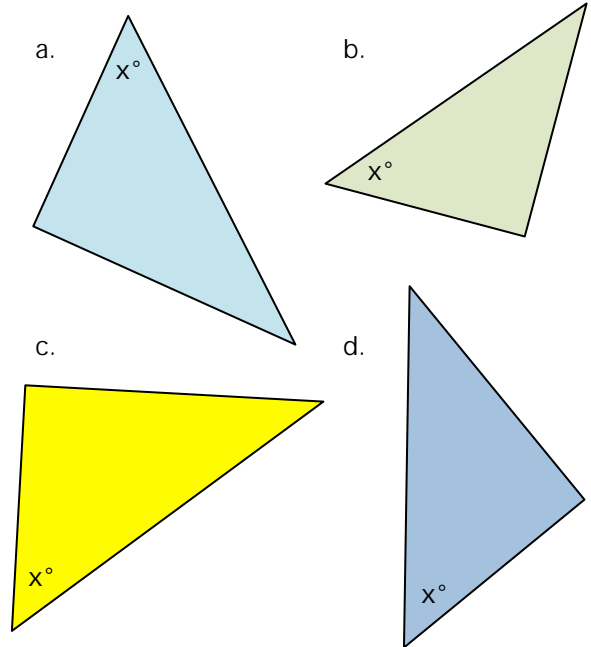
Exercise 1

1. For each of the right angled triangles below, measure the length of the longest side and measure the angle marked x° :



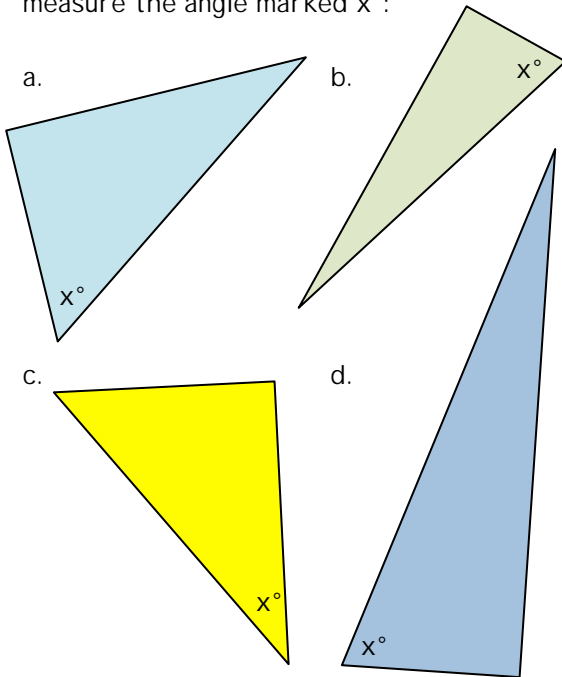
Exercise 2

1. For each of the right angled triangles below, measure the length of the longest side and measure the angle marked x° :



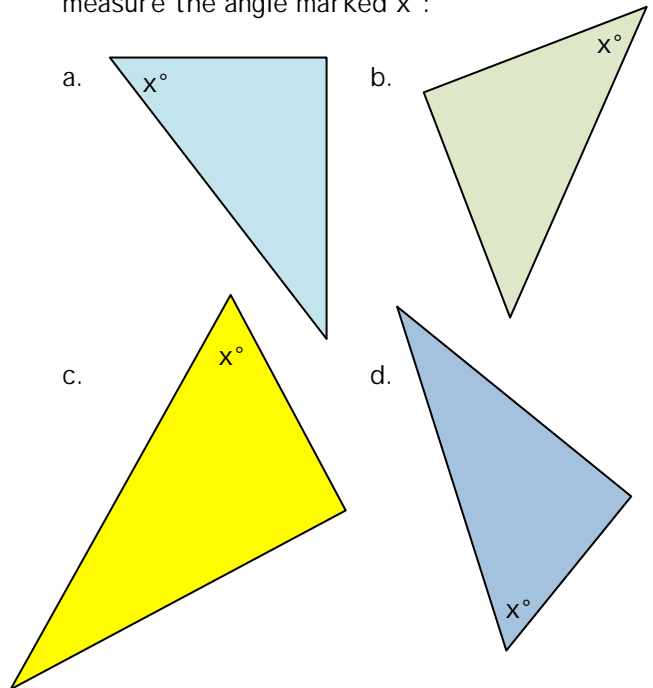
Exercise 3

1. For each of the right angled triangles below, measure the length of the longest side and measure the angle marked x° :



Exercise 4

1. For each of the right angled triangles below, measure the length of the longest side and measure the angle marked x° :



Exercise 1

David is planning a party; he wants to buy a can of juice for each of his friends attending the party.

24 pack £10.99

6 pack £3.50

He wants to pay as little as possible for the juice. (a) How many of each pack should he buy and (b) how much will this cost for:

1. 25 people
2. 65 people
3. 100 people
4. 17 people

Exercise 2

An English teacher is planning a trip for his pupils.

48 seater £200

28 seater £140

He wants to pay as little as possible for the buses.

(a) How many buses should he hire and (b) how much will this cost for:

1. 130 people
2. 200 people
3. 100 people
4. 50 people

Exercise 3

Saima is planning a party; she wants to buy a can of juice for each of her friends attending the party.

12 pack £7.99

6 pack £4.50

She wants to pay as little as possible for the juice. (a) How many of each pack should she buy and (b) how much will this cost for:

1. 15 people
2. 37 people
3. 50 people
4. 9 people

Exercise 4

A maths teacher is planning a trip for her pupils.

52 seater £220

30 seater £150

She wants to pay as little as possible for the buses.

(a) How many buses should she hire and (b) how much will this cost for:

1. 140 people
2. 200 people
3. 90 people
4. 59 people

Numeracy

Best Value

Exercise 1

A survey was carried out in an English secondary school, 150 pupils were asked their favourite football team. The pie chart was produced.

Favourite Teams



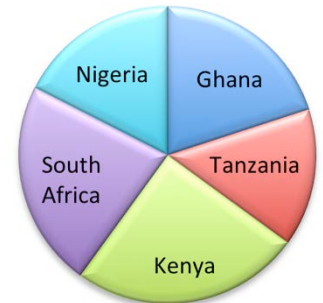
Using the angle measured at the centre for each of the teams given below, calculate the number of supporters:

1. Chelsea = 72°
2. Man Utd = 96°
3. Man City = 84°
4. Liverpool = 60°

Exercise 2

In the Commonwealth Games 200 athletes were competing from some African nations. This is represented in the pie chart.

Commonwealth Teams



Using the angle measured at the centre for each of the nations given below, calculate the number of athletes:

1. Nigeria = 63°
2. Kenya = 90°
3. Tanzania = 54°
4. Ghana = 72°

Exercise 3

A survey was carried out in an English secondary school, 2000 pupils were asked their favourite football team. The pie chart was produced.

Favourite Teams



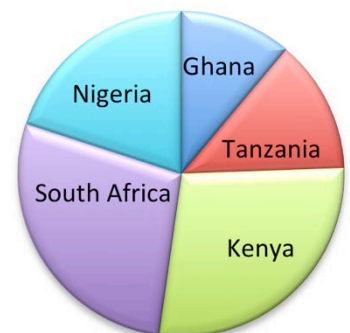
Using the angle measured at the centre for each of the teams given below, calculate the number of supporters:

1. Chelsea = 54°
2. Man Utd = 90°
3. Man City = 81°
4. Arsenal = 63°

Exercise 4

In the Olympic Games 900 athletes were competing from some African nations. This is represented in the pie chart.

Olympic Teams



Using the angle measured at the centre for each of the nations given below, calculate the number of athletes:

1. Nigeria = 72°
2. Kenya = 100°
3. Tanzania = 48°
4. Ghana = 40°

Exercise 1

Bank	Less than £2000	£2000 to £5000	More than £5000
RBC	1.2%	1.2%	1.8%
HBOE	1.4%	1.4%	1.7%
TBS	1.2%	1.4%	1.5%
HBSC	1.1%	1.3%	1.7%

The table above shows interest rates from banks for certain amounts of savings. Find which bank pays (a) the highest and (b) the lowest interest for savings of:

1. £3500
2. £5100
3. £1200
4. £2000

Exercise 2

Bank	Less than £1500	£1500 to £4000	More than £4000
RBC	2.3%	2.5%	2.5%
HBOE	2%	2.3%	2.4%
TBS	2.2%	2.3%	2.6%
HBSC	2.1%	2.4%	2.5%

The table above shows interest rates from banks for certain amounts of savings. Find which bank pays (a) the highest and (b) the lowest interest for savings of:

1. £3600
2. £4100
3. £800
4. £1500

Exercise 3

Bank	Less than £3000	£3000 to £6000	More than £6000
RBC	2.5%	2.5%	2.75%
HBOE	2.4%	2.6%	2.6%
TBS	2.65%	2.7%	2.7%
HBSC	2.6%	2.7%	2.7%

The table above shows interest rates from banks for certain amounts of savings. Find which bank pays (a) the highest and (b) the lowest interest for savings of:

1. £1500
2. £5100
3. £6000
4. £8000

Exercise 4

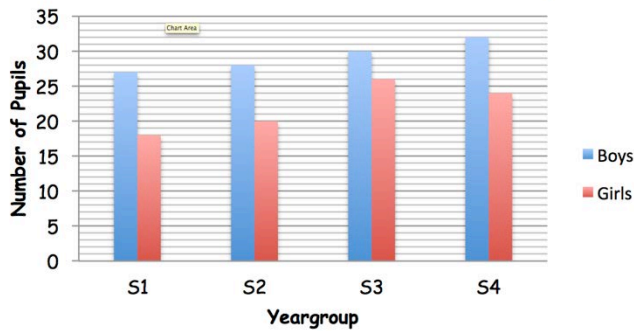
Bank	Less than £5000	£5000 to £10,000	More than £10,000
RBC	4%	4%	4%
HBOE	3.9%	4.1%	4.2%
TBS	3.7%	3.9%	4%
HBSC	3.95%	4%	4.25%

The table above shows interest rates from banks for certain amounts of savings. Find which bank pays (a) the highest and (b) the lowest interest for savings of:

1. £4800
2. £8600
3. £10,000
4. £20,000

Exercise 1

Watch TV for more than 2 Hours each day

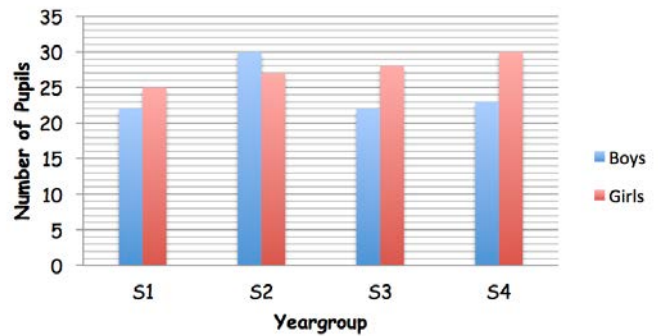


A group of S2 pupils conducted a survey to find out how many pupils watched TV for more than 2 hours each day.

- (a) How many s1 girls watch more than 2 hours?
- (b) How many S3 boys watch more than 2 hours?
- (c) Compare TV watching of both boys and girls across the year-groups.

Exercise 2

Have more than 1 sibling

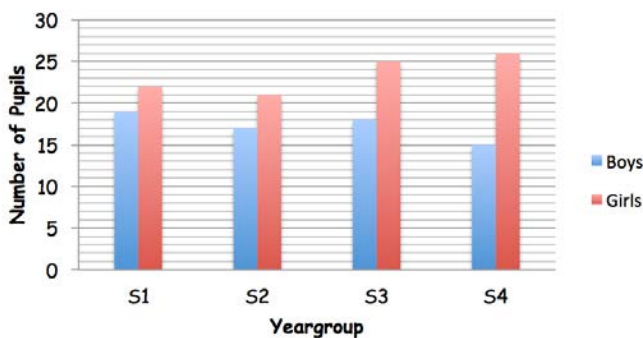


A group of S1 pupils conducted a survey to find out how many pupils have more than 1 sibling.

- (a) How many s1 boys have more than 1 sibling?
- (b) How many S4 girls have more than 1 sibling?
- (c) Compare pupils having more than 1 sibling, both boys and girls across the year-groups.

Exercise 3

Own a Pet

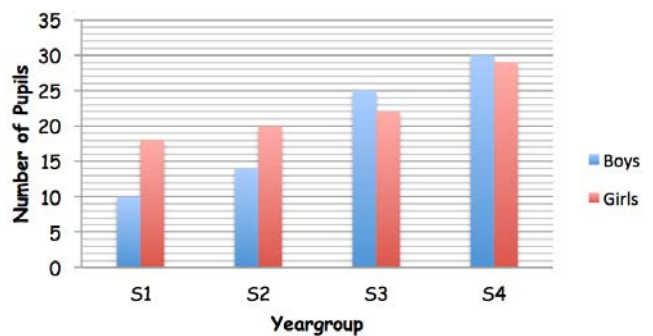


A group of S2 pupils conducted a survey to find out how many pupils own a pet.

- (a) How many S4 girls own a pet?
- (b) How many S2 boys own a pet?
- (c) Compare pupils owning a pet, both boys and girls across the year-groups.

Exercise 4

Do more than 30 minutes of homework



A group of S1 pupils conducted a survey to find out how many pupils do more than 30 minutes of homework each day.

- (a) How many s1 girls do more than 30 minutes of homework each day?
- (b) How many S3 boys do more than 30 minutes of homework each day?
- (c) Compare homework of both boys and girls across the year-groups.

Exercise 1

	Zodafone	Q2	U-Mobile
Minutes	200	500	50
Texts	500	1000	Unlimited
Data (mb)	1000	500	500

The above table shows mobile phone deals. Which company is best for each of the following (give a reason for your answer).

1. 300 minutes, 200 texts and 300mb of data.
2. 30 minutes, 800 texts and 400mb of data.
3. 180 minutes, 650 texts and 480mb of data.

Exercise 2

	Zodafone	Q2	U-Mobile
Minutes	200	300	500
Texts	600	400	500
Data (mb)	750	300	500

The above table shows mobile phone deals. Which company is best for each of the following (give a reason for your answer).

1. 280 minutes, 300 texts and 340mb of data.
2. 300 minutes, 450 texts and 300mb of data.
3. 200 minutes, 300 texts and 600mb of data.

Exercise 3

	Zodafone	Q2	U-Mobile
Minutes	600	700	500
Texts	1000	750	Unlimited
Data (mb)	400	500	1000

The above table shows mobile phone deals. Which company is best for each of the following (give a reason for your answer).

1. 600 minutes, 800 texts and 200mb of data.
2. 470 minutes, 700 texts and 900mb of data.
3. 100 minutes, 3000 texts and 300mb of data.

Exercise 4

	Zodafone	Q2	U-Mobile
Minutes	50	100	200
Texts	Unlimited	1000	800
Data (mb)	3000	1000	2000

The above table shows mobile phone deals. Which company is best for each of the following (give a reason for your answer).

1. 100 minutes, 700 texts and 1500mb of data.
2. 80 minutes, 900 texts and 900mb of data.
3. 40 minutes, 1000 texts and 2500mb of data.

Exercise 1

- Two football scratch cards offer different conditions:
Lucky Goal card has 26 teams and 6 winners.
Striker card has 38 teams and 8 winners.

With which card is there a greater chance of winning a prize? Justify your answer.
- Two swimming clubs have limited places available for lessons
Happy swim has 86 applications with 28 available spaces.
Aqua fit has 110 applications with 42 available spaces.

Which swimming club offers applicants the greater chance of being selected at random? Justify your answer.

Exercise 2

- Two lucky prize draws offer different conditions. You just pick a lucky ball from a hat to win.
Win Big hat has 82 balls with 12 winners.
Go for it hat has 64 balls with 10 winners.

Which prize draw offers the best chance of winning? Justify your answer.
- Two basketball clubs have limited places available for lessons
Slam Dunk has 140 applications with 35 available spaces.
Bounce has 250 applications with 75 available spaces.

Which basketball club offers applicants the greater chance of being selected at random? Justify your answer.

Exercise 3

- Two football scratch cards offer different conditions:
Lucky Goal card has 20 teams and 7 winners.
Striker card has 34 teams and 12 winners.

With which card is there a greater chance of winning a prize? Justify your answer.
- Two swimming clubs have limited places available for lessons
Happy swim has 47 applications with 16 available spaces.
Aqua fit has 53 applications with 19 available spaces.

Which swimming club offers applicants the greater chance of being selected at random? Justify your answer.

Exercise 4

- Two lucky prize draws offer different conditions. You just pick a lucky ball from a hat to win.
Win Big hat has 58 balls with 9 winners.
Go for it hat has 74 balls with 15 winners.

Which prize draw offers the best chance of winning? Justify your answer.
- Two basketball clubs have limited places available for lessons
Slam Dunk has 225 applications with 72 available spaces.
Bounce has 340 applications with 108 available spaces.

Which basketball club offers applicants the greater chance of being selected at random? Justify your answer.

<p>Exercise 1</p> <p>1. Three cricket teams from the same school have different winning records.</p> <p>Team A have won 8 out of 11 games. Team B have won 16 out of 23 games. Team C have won 14 out of 19 games.</p> <p>Which team has the best winning record? Justify your answer through calculation.</p> <p>2. Three local football teams play in different leagues.</p> <p>Team A have won 3 out of 8 games. Team B have won 7 out of 13 games. Team C have won 9 out of 24 games.</p> <p>Which team has the best winning record? Justify your answer through calculation.</p>	<p>Exercise 2</p> <p>1. Three hockey teams play in the same mini league. They have all played a different number of games.</p> <p>Team A have won 34 out of 47 games. Team B have won 21 out of 35 games. Team C have won 23 out of 32 games.</p> <p>Which team has the best winning record? Justify your answer through calculation.</p> <p>2. Three rugby teams from the same town have different records.</p> <p>Team A have won 11 out of 52 games. Team B have won 7 out of 32 games. Team C have won 9 out of 41 games.</p> <p>Which team has the best winning record? Justify your answer through calculation.</p>
<p>Exercise 3</p> <p>1. Three netball teams from the same school have different winning records.</p> <p>Team A have won 20 out of 32 games. Team B have won 16 out of 25 games. Team C have won 8 out of 14 games.</p> <p>Which team has the best winning record? Justify your answer through calculation.</p> <p>2. Three local ice-hockey teams play in different leagues.</p> <p>Team A have won 10 out of 52 games. Team B have won 8 out of 40 games. Team C have won 11 out of 59 games.</p> <p>Which team has the best winning record? Justify your answer through calculation.</p>	<p>Exercise 4</p> <p>1. Three volleyball teams play in the same mini league. They have all played a different number of games.</p> <p>Team A have won 22 out of 82 games. Team B have won 29 out of 102 games. Team C have won 23 out of 90 games.</p> <p>Which team has the best winning record? Justify your answer through calculation.</p> <p>3. Three shinty teams from the same town have different records.</p> <p>Team A have won 3 out of 16 games. Team B have won 8 out of 40 games. Team C have won 7 out of 30 games.</p> <p>Which team has the best winning record? Justify your answer through calculation.</p>

Numeracy	Chance & Probability
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