

Basic Arithmetic

Exercise 1 (Addition)

1) $17 + 3$

2) $57 + 4$

3) $12 + 9$

4) $16 + 14$

5) $14 + 37$

6) $28 + 25$

7) $317 + 469$

8) $422 + 279$

9) $458 + 419$

10) $511 + 66$

11) $426 + 36$

12) $125 + 42$

13) $38 + 17 + 26$

14) $37 + 57 + 46$

15) $32 + 74 + 48$

16) $426 + 29 + 23$

17) $474 + 32 + 71$

18) $286 + 15 + 42$

19) $602 + 155 + 86$

20) $153 + 329 + 71$

Exercise 2

Work out the answers to each of the following:–

1) $7 \cdot 2 + 3 \cdot 6$

2) $5 \cdot 7 + 4 \cdot 5$

3) $12 \cdot 3 + 17 \cdot 8$

4) $16 \cdot 5 + 14 \cdot 2$

5) $1 \cdot 4 + 2 \cdot 7$

6) $4 \cdot 28 + 2 \cdot 15$

7) $4 \cdot 17 + 3 \cdot 69$

8) $5 \cdot 22 + 1 \cdot 79$

9) $3 \cdot 58 + 2 \cdot 19$

10) $1 \cdot 11 + 6 \cdot 66$

11) $4 + 3 \cdot 6$

12) $12 + 4 \cdot 2$

13) $13 \cdot 8 + 1 \cdot 7$

14) $56 \cdot 1 + 3 \cdot 46$

15) $17 \cdot 1 + 2 \cdot 83$

16) $1 \cdot 7 + 2 \cdot 57$

17) $12 \cdot 6 + 1 \cdot 47$

18) $14 + 0 \cdot 29$

19) $15 + 3 \cdot 42$

20) $13 + 2 \cdot 53$

Exercise 3

- 1) Two tables are placed together to form a larger one. The first table is 67.4 cm long and the second table is 56.8 cm long.
What is the total length?
- 2) Three boxes weigh 4.6 kg, 7.9 kg and 18.2 kg.
What is the total weight?
- 3) What length of shelf is needed to hold books with thicknesses of 6.3 cm, 7.4 cm, 1.8 cm, 2.8 cm and 4.9 cm?
- 4) John weighs 45.2 kg and Allan weighs 40kg.
What is their total weight?
- 5) Every week Mr and Mrs McNally buy a TV guide for 90p, a Puzzle Time for 82p and a Crossword Fun for 67p.
How much does this cost them every week?
- 6) On a Saturday 1432 people visited an art gallery, while 976 visited on Sunday. How many people visited that weekend?
- 7) Mrs Welsh was buying prizes for everyone in her classes for the end of term. In her 3 classes there were 32 pupils, 29 pupils and 27 pupils. How many prizes did she need to buy?
- 8) Mr Jarvie had 4 rolls of material holding 23 metres, 17 metres, 32 metres and 19 metres.
How much material does he have in total?

Exercise 4 (Subtraction)

Work out the answers to each of the following:

- | | | |
|--|--------------------------------|--------------------|
| 1) $6.8 - 4.3$ | 2) $9.6 - 1.8$ | 3) $32.7 - 14.2$ |
| 4) $15.6 - 14.7$ | 5) $26.9 - 12.4$ | 6) $17.28 - 10.43$ |
| 7) $56.48 - 25.29$ | 8) $82.04 - 63.48$ | 9) $92.16 - 25.31$ |
| 10) $83.58 - 36.21$ | 11) $25.83 - 15.4$ | 12) $36.42 - 15.9$ |
| 13) $83.29 - 16.3$ | 14) $25.62 - 7.3$ | 15) $34.26 - 1.8$ |
| 16) $26.4 - 15.35$ | 17) $12.4 - 5.62$ | 18) $17.4 - 8.99$ |
| 19) $34.6 - 2.11$ | 20) $73.2 - 16.78$ | 21) $14 - 3.2$ |
| 22) $83 - 5.6$ | 23) $46 - 3.7$ | 24) $36 - 8.08$ |
| 25) $42 - 6.72$ | 26) Take 19.2 from 76.8 | |
| 27) From 0.67 subtract 0.38 | 28) Subtract 1.9 from 10.2 | |
| 29) Evaluate $7.62 - 0.81$ | | |
| 30) What is the difference between 17.93 and 13.27 ? | | |

Exercise 5

- 1) Tanya has a 350 millilitre bottle of shampoo. She uses it to fill a 90 millilitre travel bottle. How much is now left in the original bottle?
- 2) A curtain with drop length of 192 centimetres was needed for a window. Lucy's curtains are 148 centimetres. By how much are they short?
- 3) Ewan and Scott have to put flyers through 470 letterboxes. On the first evening they delivered 145. How many had they still to deliver?
- 4) Judy received her weekly pay of £540. She spent £68.43 in the supermarket and £27.99 on a pair of shoes. How much did she have left?

- 5) In the final vote for the winner on “Biggest Brother” Jana received 11240 votes and Adam received 9768 votes.
- How many votes were there in total?
 - By how many votes did Jana win?
- 6) To make green paint, a painter mixes 27.42 litres of blue paint with 14.3 litres of yellow paint. He uses 17.3 litres of this green paint. How much paint is not used?
- 7) The Colrain High School Show cost £1746 to produce. £1245.50 was made from ticket sales and £876.32 from refreshment sales. How much profit did the school make?
- 8) The Lewis family won £100,000 on the lottery and used some of the money to redecorate their house. They bought a suite for £1279, carpets for £742 and a kitchen for £5200. How much money did they have left?

Exercise 6 (Multiplication)

Work out the answers to each of the following:

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|----------------------|----------------------|----------------------|
| 1) 16.3×6 | 2) 29.4×7 | 3) 38.6×2 |
| 4) 29.3×4 | 5) 51.6×2 | 6) 29.7×3 |
| 7) 23.8×9 | 8) 14.81×5 | 9) 29.31×3 |
| 10) 93.37×7 | 11) 18.81×5 | 12) 38.72×4 |
| 13) 29.9×6 | 14) 17.81×8 | 15) 14.93×9 |
| 16) 83.8×8 | 17) 56.92×4 | 18) 73.24×5 |
| 19) 9.49×9 | 20) 92.01×7 | 21) 15×8 |
| 22) 7.42×6 | 23) 28.39×5 | 24) 60.02×9 |

Exercise 7

- | | | |
|-------------------------|-------------------------|-------------------------|
| 1) 4.2×10 | 2) 7.3×10 | 3) 2.8×10 |
| 4) 14.3×10 | 5) 17.28×10 | 6) 18.29×10 |
| 7) 6.7×100 | 8) 4.3×100 | 9) 7.9×100 |
| 10) 42.81×100 | 11) 39.91×100 | 12) 99.81×100 |
| 13) 4.3×1000 | 14) 6.2×1000 | 15) 13.3×1000 |
| 16) 19.9×1000 | 17) 19.91×1000 | 18) 14.03×1000 |
| 19) 39.73×1000 | 20) 47.83×1000 | 21) 57.19×1000 |
| 22) 42.31×20 | 23) 39.96×50 | 24) 92.81×70 |
| 25) 8.3×90 | 26) 36.2×30 | 27) 43.3×60 |
| 28) 24.3×300 | 29) 16.28×500 | 30) 18.79×700 |
| 31) 6.8×900 | 32) 4.31×200 | 33) 37.9×400 |
| 34) 17.9×4000 | 35) 19.87×7000 | 36) 76.03×6000 |

Exercise 8

- 1) Mr Johnston can make 32 cones from one tub of ice cream. In one weekend he used 8 tubs. How many cones did he make?
- 2) If one T-shirt cost $\text{£}9.96$, how much will it cost to buy 7 of these T-shirts?
- 3) The Boyles would like to buy the dining set shown. How much would it cost them for the table and 4 chairs?



- 4) Brian collected £45 from each of the 70 staff at Hydro Water for the Christmas party. How much money did he collect altogether?
- 5) Chocolate frogs cost 12p, orange bottles cost 7p and sherbert fizzys cost 5p. Find the cost of 6 chocolate frogs, 4 orange bottles and 8 sherbert fizzys.
- 6) Two shops are selling the same model of television. They are offering these for sale with different deals.

Light House
Deposit £75
Six payments
of £45·20

Bright Home
Deposit £120
Six payments of
£41·35

Which shop has the cheaper deal? Justify your answer.

- 7) Ian needs to buy car insurance. He spots these deals with two companies.

Churchall
Deposit £125
Nine payments
of £35·70

Direct Call
Deposit £180
Nine payments
of £28·70

Which insurance company has the cheaper deal?
Justify your answer.

8) Mr Kane is organising a trip for the pupils in S1.

He needs to hire three 49-seater buses and two 26-seater buses.

There will be no empty seats on the buses.

49-seater

£210

26-seater

£130

How much will it cost for the hire of the buses?

How many people are going on the trip?

9) Judy needs to buy six packets of crisps.

Which shop is the cheaper option?

Cut Price Deals

Mega pack crisps

89p each

****3 for 2****

Value Deals

Mega pack crisps

62p each

10) Tony is baking almond biscuits and uses the recipe below.

<p>Makes 10 biscuits</p> <p>150g flour</p> <p>75g sugar</p> <p>50g ground almonds</p> <p>125g margarine</p> <p>Pinch of salt</p>

If he wants to bake 30 biscuits, how much of each ingredient will he need?

Exercise 9 (Division)

1) $828.6 \div 2$

2) $19.50 \div 6$

3) $2.736 \div 6$

4) $59.5 \div 5$

5) $31.203 \div 9$

6) $182.68 \div 4$

7) $164.92 \div 7$

8) $0.24 \div 2$

9) $60.444 \div 9$

10) $273.6 \div 6$

11) $54.312 \div 8$

12) $31.56 \div 4$

13) $1461.6 \div 4$

14) $88.74 \div 6$

15) $235.35 \div 3$

16) $16.5 \div 5$

17) $5.31 \div 9$

18) $12.6 \div 2$

19) $8.778 \div 7$

20) $2.368 \div 8$

Exercise 10

- | | | |
|------------------------------|-------------------------------|-------------------------------|
| 1) $57 \div 10$ | 2) $6 \cdot 2 \div 10$ | 3) $13 \cdot 4 \div 10$ |
| 4) $286 \div 10$ | 5) $38 \cdot 24 \div 10$ | 6) $1783 \div 10$ |
| 7) $57 \cdot 5 \div 100$ | 8) $203 \cdot 2 \div 100$ | 9) $1769 \cdot 73 \div 100$ |
| 10) $24323 \div 100$ | 11) $1325 \cdot 8 \div 100$ | 12) $6723 \div 100$ |
| 13) $17756 \div 1000$ | 14) $2935 \cdot 67 \div 1000$ | 15) $1956 \cdot 21 \div 1000$ |
| 16) $1234 \cdot 5 \div 1000$ | 17) $73246 \div 1000$ | 18) $2693 \cdot 64 \div 1000$ |
| 19) $5780 \div 20$ | 20) $37 \cdot 2 \div 30$ | 21) $13 \cdot 5 \div 50$ |
| 22) $3428 \cdot 8 \div 80$ | 23) $3824 \div 40$ | 24) $147 \cdot 84 \div 70$ |
| 25) $24324 \div 300$ | 26) $4325 \cdot 6 \div 400$ | 27) $672 \cdot 68 \div 200$ |
| 28) $12348 \div 6000$ | 29) $8624 \cdot 5 \div 5000$ | 30) $2693 \cdot 64 \div 3000$ |

Exercise 11

- 1) Katie has 192 books. She has 8 shelves on her bookcase. How many books can she fit on each shelf?
- 2) A group of 138 pupils from Tarley Primary School are visiting the science museum. They are split into groups of 6 pupils. How many groups are there?
- 3) Mr Miller inherits £7600. He decides to keep £3000 and share the rest equally among his 5 grandchildren. How much does each grandchild receive?

- 4) Mrs Hussein charges £50 for a decorated cake.
If she made £8000 last year, how many cakes did she sell?
- 5) Mr Bell bought fifteen 20-litre tins of cooking oil.
If he uses 4 litres each day, how long will it last?

Calculators may be used for Questions 6 and 7

- 6) Mr Kane is organising a trip for the pupils in S2.

He needs to hire buses to accommodate the 171 pupils and teachers attending.

49-seater
£210

26-seater
£130

He wants to pay the lowest total hire charge available.

How many buses of each size should he hire?

- 7) Mr Belarbi is organising a trip for the pupils in S3.

He needs to hire buses to accommodate the 215 pupils and teachers attending.

48-seater
£220

26-seater
£140

He wants to pay the lowest total hire charge available.

How many buses of each size should he hire?

8) An empty box has a weight of 325g.

When twenty bars of soap are put into it, it has a weight of 1625g.

What is the weight of one bar of soap?

9) An empty box has a weight of 250g.

When thirty tins of soup are put into it, it has a weight of 9400g.

What is the weight of one tin of soup?

10) Brenda estimates that she needs 42000 ice cubes for a party.

If ice cubes are sold in boxes of 500 how many boxes will be needed?

Exercise 12 (Mixed problems)

1) Two tables are placed together to form a larger one. If the first table is 68.5 cm long and the second table is 58.8 cm long, what is the total length?

2) A piece of wood is 37.4 cm long. If 12.7 cm is cut off from one end what length remains?

3) A child places 5 toy bricks of length 14.6 cm in a straight line. What is the total length?

4) A piece of ribbon 114.8 cm long is shared equally among 7 girls. What length should each girl receive?

5) Three boxes weigh 4.6 kg, 7.9 kg and 18.2 kg. What is the total weight?

6) A bottle of Coca-Cola holds 2 litres. What volume remains after a glass of 0.35 litres has been removed?

- 7) What length of shelf is needed to hold books with thicknesses of 5.3 cm, 8.4 cm, 1.9 cm, 2.7 cm and 3.6 cm?
- 8) Billy does 10 press ups in 26.8 seconds. How long does he take for each press up?
- 9) Six spoonfuls of medicine each holding 5.1 ml are removed from a bottle containing 50 ml. How much medicine is left in the bottle?
- 10) A car uses 0.12 litres of petrol for every mile it travels. How many litres will be used in travelling 9 miles?

Exercise 13 (Fraction of a quantity)

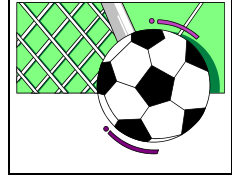
- 1) $\frac{1}{2}$ of 48 2) $\frac{1}{4}$ of 20 3) $\frac{1}{3}$ of 36 4) $\frac{1}{2}$ of 62
- 5) $\frac{1}{3}$ of 42 6) $\frac{1}{4}$ of 52 7) $\frac{1}{5}$ of 35 8) $\frac{1}{5}$ of 60
- 9) $\frac{1}{2}$ of 76 10) $\frac{1}{3}$ of 54 11) $\frac{1}{4}$ of 72 12) $\frac{1}{3}$ of 75
- 13) $\frac{1}{5}$ of 80 14) $\frac{1}{5}$ of 75 15) $\frac{1}{2}$ of 92 16) $\frac{1}{3}$ of 81
- 17) $\frac{1}{4}$ of 60 18) $\frac{1}{5}$ of 90 19) $\frac{1}{8}$ of 24 20) $\frac{1}{8}$ of 40
- 21) $\frac{1}{8}$ of 56 22) $\frac{1}{8}$ of 80 23) $\frac{1}{10}$ of 40 24) $\frac{1}{10}$ of 50
- 25) $\frac{1}{10}$ of 70 26) $\frac{1}{10}$ of 90 27) $\frac{1}{5}$ of 85 28) $\frac{1}{2}$ of 38
- 29) $\frac{1}{8}$ of 96 30) $\frac{1}{3}$ of 96 31) $\frac{1}{2}$ of 13 32) $\frac{1}{2}$ of 19

Exercise 14

- | | | |
|---------------------------|---------------------------|----------------------------|
| 1) $\frac{1}{3}$ of 138 | 2) $\frac{1}{5}$ of 450 | 3) $\frac{1}{8}$ of 480 |
| 4) $\frac{1}{10}$ of 560 | 5) $\frac{1}{20}$ of 860 | 6) $\frac{1}{100}$ of 3800 |
| 7) $\frac{2}{3}$ of 156 | 8) $\frac{3}{5}$ of 935 | 9) $\frac{2}{5}$ of 470 |
| 10) $\frac{3}{8}$ of 576 | 11) $\frac{5}{8}$ of 192 | 12) $\frac{7}{8}$ of 304 |
| 13) $\frac{3}{10}$ of 370 | 14) $\frac{5}{8}$ of 128 | 15) $\frac{7}{10}$ of 790 |
| 16) $\frac{9}{10}$ of 450 | 17) $\frac{3}{20}$ of 660 | 18) $\frac{3}{8}$ of 776 |
| 19) $\frac{7}{20}$ of 780 | 20) $\frac{9}{20}$ of 540 | 21) $\frac{7}{20}$ of 540 |
| 22) $\frac{4}{5}$ of 145 | 23) $\frac{3}{10}$ of 650 | 24) $\frac{3}{8}$ of 424 |
| 25) $\frac{7}{8}$ of 360 | 26) $\frac{3}{5}$ of 480 | 27) $\frac{3}{10}$ of 120 |
| 28) $\frac{4}{5}$ of 290 | 29) $\frac{7}{10}$ of 240 | 30) $\frac{7}{8}$ of 496 |

Exercise 15

- 1) a) A football match last 90 minutes. How long is the first half?
b) A rugby match lasts 80 minutes. How many minutes does the first quarter last?



- 2) Brian has 45p, but he owes $\frac{1}{5}$ of it to Peter.

- a) How much does he owe to Peter?
b) How much does he have left?

- 3) $\frac{3}{10}$ of a class of 30 pupils are absent.

- a) How many are absent? b) How many are present?

- 4) 42 cars are in the car park. $\frac{1}{3}$ of them are blue.

How many blue cars are there?

- 5) Calculate these amounts in pence.

a) $\frac{1}{10}$ of £1

b) $\frac{3}{10}$ of £2

c) $\frac{3}{4}$ of £1

d) $\frac{1}{2}$ of £1.60

e) $\frac{1}{5}$ of £2

f) $\frac{1}{3}$ of £1.50

- 6) John gets $\frac{2}{3}$ of £72 as a prize. How much money does he get?
- 7) A tank holds 1600 litres of oil when it is full. If it is $\frac{1}{4}$ full, how many litres have been used?
- 8) Calculate
- a) $\frac{2}{3}$ of 12cm b) $\frac{3}{4}$ of 20 pupils
- c) $\frac{2}{5}$ of 30 grams d) $\frac{7}{8}$ of 24 days
- 9) There are 60 minutes in an hour. How many minutes are there in:
- a) $\frac{1}{2}$ hour b) $\frac{1}{4}$ hour c) $\frac{3}{4}$ hour d) $\frac{1}{3}$ hour
- 10) Calculate
- a) $\frac{3}{4}$ of £100 b) $\frac{1}{10}$ of £120 c) $\frac{3}{8}$ of £40 d) $\frac{2}{5}$ of £35
- 11) $\frac{2}{3}$ of a person's weight is water. Jean weighs 63 kg.
How much of this is water?
- 12) Calculate the length of video tape needed to record **two** TV programmes each lasting $\frac{3}{4}$ of an hour.
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