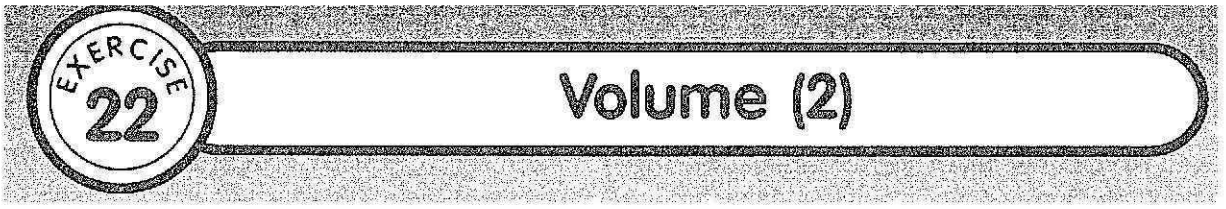

Do these sums. Show all your working clearly.

(1) The volume of a cuboid is 189 cm^3. What is its length if its height is 7 cm and its breadth is 3 cm?

(2) Calculate the base area of a cuboid of volume 175 cm^3 and height 7 cm.

(3) A rectangular tank is 25 cm long, 16 cm wide and 30 cm high. It contains 8 ℓ of water. How many more litres of water can it contain? (1 ℓ = 1000 cm^3)

(4) The volume of a wooden block is 1200 cm^3. Its length is 5 cm more than its breadth. If its length is 10 cm, find its height.

(5) A rectangular tank 30 cm by 20 cm by 40 cm is $\frac{2}{5}$ filled with water. How many litres of water must be added to make the tank full? (1 ℓ = 1000 cm^3)

(6) A tank 30 cm long, 10 cm wide and 50 cm high is full of water. If the water is poured into containers measuring 5 cm long, 2 cm wide and 10 cm high, how many such containers are needed?

EXERCISE 23

Volume (3)

Do these sums. Show all your working clearly.

(1) A rectangular tank 20 cm long, 30 cm wide and 40 cm high was completely filled with water. If Susan took out 7.5 ℓ of water from the tank, by how many cm did the water level drop? (1 ℓ = 1000 cm^3)

(2) A rectangular tank 30 cm long, 20 cm wide and 50 cm high contains 7 ℓ of water. How many litres of water are needed to raise the water level to $\frac{2}{5}$ of the height of the tank?

(3) A rectangular fish tank 60 cm long, 35 cm wide and 50 cm high is 80% filled with water. How many jugs full of water can be scooped out from the tank if each jug holds 2 ℓ of water? (1 ℓ = 1000 cm^3)

(4) A rectangular container of volume 3600 cm^3 is $\frac{3}{4}$ full of water. If all the water from the container is poured to fill a tank 15 cm long and 20 cm high, what is the width of the tank?

EXERCISE 24

Volume (4)

Do these sums. Show all your working clearly.

(1) A rectangular tank 17 cm long and 10 cm wide holds 2040 cm^3 of water. A small iron cube of side 3 cm is thrown into the tank. What is the new height of the water in the tank? (Give your answer correct to 1 decimal place.)

(2) A rectangular tank 40 cm long and 30 cm wide contains water to a height of 24 cm. When some metal cubes of edge 10 cm are placed in the water, the water level rises to 29 cm. How many metal cubes are there in the tank?

(3) A rectangular tank 50 cm long and 60 cm wide contains some water and one metal cube of edge 10 cm. The height of the water is 30 cm. By how many centimetres will the water level rise if David puts in 6 more similar metal cubes?

(4) A rectangular tank 30 cm long, 20 cm wide and 50 cm high contains only some metal balls. The volume of the metal balls is 5000 cm^3 each. The tank is being filled with water flowing from a tap at a rate of 2 litres per minute. If it takes 5 minutes to fill up the tank, how many metal balls are there in the tank?
(1 ℓ = 1000 cm^3)

Exercise 12

(1) \$216 (2) 1200 (3) \$90 (4) 2000

(5) Eng: 84, Maths: 81 (6) $81\frac{3}{5}$ kg

(7) 8500 kg (8) \$18 200

Exercise 13

A (1) 72 km/h (2) 195 km (3) 6 h

B (1) 82 km (2) 850 km/h (3) 9.75 km
(4) 1.45 p.m. (5) 152.5 km (6) 60 km
(7) (a) Car A (b) 7 km/h

(8) $68\frac{1}{5}$ km/h (9) 3 h (10) $7\frac{1}{2}$ h

Exercise 14

(1) 40 km/h (2) 45 km (3) 126 km
(4) 20 min (5) 1.30 p.m.
(6) $13\frac{5}{7}$ km/h

Exercise 15

(1) 80 m/min (2) $3\frac{3}{8}$ h (3) $2\frac{1}{4}$ h

(4) 3187 m (5) 30 min (6) 60 km/h

Exercise 16

A (1) 18.84 cm (2) 31.4 cm (3) 66 cm
(4) 22 m

B (1) $2\frac{13}{32}$ m^2 (2) 28.26 cm^2 (3) 1.54 m^2
(4) 78.5 cm^2

Exercise 17

(1) $28\frac{4}{7}$ cm (2) 9.42 cm^2

(3) $10\frac{5}{14}$ cm^2 (4) 2.3 cm^2

(5) 3.44 cm^2 (6) 26.28 cm

(7) 12.56 m^2 (8) $1\frac{5}{7}$ cm^2

(9) 22.28 cm^2 (10) 41.12 m

(11) $16\frac{4}{7}$ cm (12) 58.875 cm^2

Revision 1

A (1) 3 (2) 3 (3) 4 (4) 4
(5) 2 (6) 2 (7) 2 (8) 1
(9) 3 (10) 2

B (1) 0.95 (2) 56 (3) $\frac{9}{7}$ (4) 7:10
(5) 55 (6) $26\frac{7}{18}$ (7) 1.7 (8) 15
(9) 12.56

C (1) $67\frac{1}{2}$ km/h
(2) Huadong: \$480, Lihao: \$160

Exercise 18

A (1) $\frac{1}{3}$ (2) 25% (3) 2 h (4) 4 : 1
(5) $66\frac{2}{3}$%

B (1) 20 (2) 10% (3) $\frac{2}{5}$ (4) 66.7%
(5) 4 : 1 : 2

Exercise 19

A (1) $\frac{1}{5}$ (2) 12 (3) fairy tales
(4) 10% (5) 1 : 10

B (1) $\frac{1}{2}$ (2) 25% (3) 10
(4) 10 (5) 5 : 1

Exercise 20

A (1) 5% (2) \$15 (3) $\frac{1}{2}$
(4) \$5 (5) 3 : 5

B (1) 40 (2) $\frac{3}{10}$ (3) 520
(4) 40 (5) 8 : 6 : 5

Exercise 21

A (1) 56 cm^3 (2) 96 cm^3
(3) 168 cm^3 (4) 144 cm^3
B (1) 24 (2) 20
C (1) 6 cm (2) 12 cm

Exercise 22

(1) 9 cm (2) 25 cm^2 (3) 4 ℓ
(4) 24 cm (5) 14.4 ℓ (6) 150

Exercise 23

(1) 12.5 cm (2) 5 ℓ
(3) 42 (4) 9 cm

Exercise 24

(1) 12.2 cm (2) 6
(3) 2 cm (4) 4