1 The diagram shows four blocks of wood, A, B, C and D in two different arrangements.

![Diagram of blocks A, B, C, D]

Given that D is heavier than B.

Identify the block which is heaviest. [1]

2 Find the 4th number in the following sequence:

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1 dot  8 dots  27 dots
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3 Arrange the following decimals in ascending order and find their median.

3.28  2.56  4.92  1.34 [2]

4 The diagram shows a ship at anchor off two lighthouses L and H. The light from L shines on the ship every 30 seconds. The light from H shines on the ship every 40 seconds.

How many seconds does it take for both lights to shine on the ship at once? [1]

5 Find the sum of $3a^2 + 2b$ and $6a^2 - 7b$. [2]
6 The diagram shows a right-angled triangle.

\[ c = \sqrt{a^2 + b^2} \]

Calculate the value of \( c \) when \( a = 24 \) and \( b = 10 \). \[2\]

7 The water level of the Zambezi River dropped from its maximum level of 710 cm to 568 cm.

(a) By how many cm did the water level drop? \[1\]

(b) Calculate the percentage decrease in the water level. \[2\]

(c) Find the water level if the river was flowing at \( \frac{3}{10} \) of its maximum level. \[4\]

8 Jennifer took 2 hours 40 minutes to complete her homework. Jack took 2.6 hours.

(a) Find Jack's time in minutes. \[1\]

(b) How many minutes longer did Jennifer take to complete her homework? \[1\]

9 Samuel bought a refrigerator. He paid 12 equal instalments as well as a deposit of N$450. He paid N$1 890 in total. Calculate the amount he had to pay for each instalment. \[2\]

10 Maria invested N$ 500 for 3 years with simple interest. At the end of the term she got her money with interest. She received N$ 635.

(a) Show that she got N$45 interest per year. \[1\]

(b) Calculate the percentage interest per year Maria got on her investment. \[2\]
11 The diagram shows two prisms. Each cube in the prisms below has a volume of \(1\text{cm}^3\).

(a) Find the volume of prism A. \([1]\)

(b) Calculate the total surface area of prism B. \([2]\) \([3]\)

12 The coordinates of two points on a straight line are \((2;6)\) and \((4;2)\).

Calculate the gradient of the line through the points. \([2]\)

13 The diagram shows a pie chart.

(a) Express the shaded part as a fraction of the pie chart. \([1]\)

(b) The radius of the circle is \(42\ \text{cm}\).

\(\pi = \frac{22}{7}\)

Calculate the circumference of the circle. \([2]\)

(c) Find the perimeter of the shaded sector. \([1]\) \([4]\)
14 The diagram shows a speed conversion graph. Use the graph to answer the questions.

(a) A cheetah can run at a speed of about 100 km/h. Determine the cheetah's speed in m.p.h. [1]

(b) A gazelle's highest speed is about 45 m.p.h. Determine the gazelle's speed in km/h. [1] [2]

15 In the diagram a boat at point B sails towards port A.

(a) Work out the bearing of B from A. [1]

(b) Calculate the bearing of A from B. [1] [2]

16 The diagram shows a kite.

(a) Find the value of $k$. [1]

(b) Calculate the value of $l$. [1] [2]
17 The diagram shows two shapes of symmetry, $A$ and $B$.

(a) State the number of lines of symmetry of shape $A$. [1]

(b) Write down the order of rotational symmetry of shape $A$ and of shape $B$. [2]

[3]

18 A ladder is placed against the wall of a house as shown in the diagram. The foot of the ladder is 3m away from the house. The ladder forms an angle of $53,1^\circ$ with the ground.

Calculate the length of the ladder ($x$). [2]

Choose the correct ratio from the options below:

- $\sin 53,1^\circ = 0,8$
- $\cos 53,1^\circ = 0,6$
- $\tan 53,1^\circ = 1,3$

[TOTAL: 40]