

SECONDARY SCHOOLS ANNUAL EXAMINATIONS - 2003

Educational Assessment Unit - Education Division

FORM 1

MATHEMATICS (MENTAL)

TIME: 10 min.

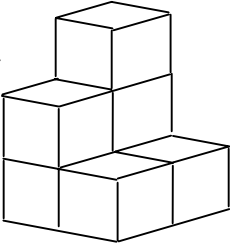
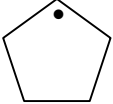
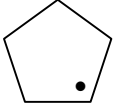
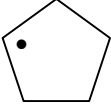
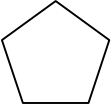
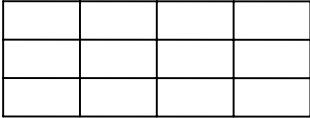



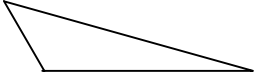
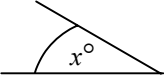
Name _____

Class _____

Mark

- ANSWER ALL QUESTIONS.
- EACH QUESTION CARRIES 1 MARK.
- CALCULATORS, RULERS, PROTRACTORS AND OTHER MATHEMATICAL INSTRUMENTS ARE NOT ALLOWED.
- WRITE DOWN YOUR ANSWER ONLY IN THE SPACE PROVIDED.
- THIS PAPER CONTAINS 10 QUESTIONS.

**DO NOT
WRITE
IN
THIS
SPACE**

QUESTION	Space for working if required
1. Fill in with a number: $43 \times 20 = 43 \times 2 \times \boxed{}$ Ans	
2. Choose the best estimate of: 425×38 <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;"><div style="border: 1px solid black; padding: 2px 10px;">1600</div> (a)</div> <div style="text-align: center;"><div style="border: 1px solid black; padding: 2px 10px;">16000</div> (b)</div> <div style="text-align: center;"><div style="border: 1px solid black; padding: 2px 10px;">1200</div> (c)</div> <div style="text-align: center;"><div style="border: 1px solid black; padding: 2px 10px;">12000</div> (d)</div> </div> Ans: _____	
3. This solid is made up of 1 cm cubes. The volume of the solid is: <div style="text-align: center; margin-top: 10px;">  </div> Ans: _____	
4. Fill in the last shape to continue the pattern: <div style="display: flex; align-items: center; justify-content: center; margin-top: 10px;">    </div> Ans: 	
5. If Christmas falls on a Thursday, what is the last day of the year? Ans: _____	
6. Shade in one third of the shape. <div style="text-align: center; margin-top: 10px;">  </div> Ans:	
7. Give two factors of 24 greater than 5. Ans: _____	
8. Which of the triangles is equilateral ? <div style="display: flex; justify-content: space-around; align-items: flex-end; margin-top: 10px;"> <div style="text-align: center;"> P</div> <div style="text-align: center;"> Q</div> <div style="text-align: center;"> R</div> <div style="text-align: center;"> Z</div> </div> Ans: _____	
9. How many bars of chocolate do I buy with 130c, if one bar costs 10c? Ans: _____	
10. The size of angle x is about: <div style="text-align: center; margin-top: 10px;">  </div> a) 300° b) 120° c) 60° d) 30° Ans: _____	

SECONDARY SCHOOL ANNUAL EXAMINATIONS 2003

Educational Assessment Unit - Education Division

FORM 1

MATHEMATICS (Main Paper)

TIME: 1h 50 min

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total Main	Mental	Global Mark
Mark																		

DO NOT WRITE ABOVE THIS LINE

Name _____

Class _____

CALCULATORS ARE NOT ALLOWED

ANSWER ALL QUESTIONS.

- 1a) Add together:
25.3, 3.6 and 427.08

- c) 3×2.2 is equal to 6×1.1
Is this true or false?

- b) Write the **smallest even** number
using all these three digits.

- d) What is the value of the digit 2 in

1 2 3.4 ?

(4 marks)

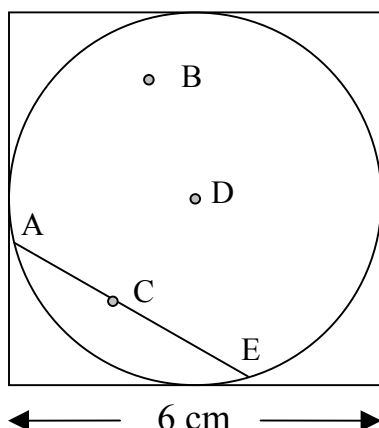
2a) $\frac{3}{5} = \frac{\boxed{}}{10}$

- c) Put $\frac{3}{5}$, 0.15, 0.5 in order, **smallest** first

b) $0.5 = \boxed{}\%$

(4 marks)

3.



The circle fits exactly inside a square of side 6 cm.

Fill in:

- a) The radius of the circle is _____ cm long.
- b) The straight line AE is called a _____ (diagonal, chord, diameter).
- c) Point _____ is the centre of the circle (A, B, C, D, E).
- d) Fill in with $>$ or $<$

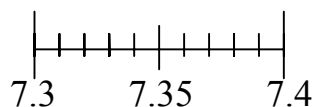
The circumference
of the circle

--

the perimeter of
the square

(4 marks)

4a)



Is 7.36 nearer to 7.3 or to 7.4?

- b) (i) Henry delivers magazines after school. He gets **1c** for each one he delivers. This week he delivered **815**. How much did he earn?
- (ii) Pamela's parents give her **Lm2.50** for every hour she helps on the farm. This week she spent 4 hours helping after school. How much did she earn?

Lm _____

Lm _____

(iii) How much **more** than Henry did Pamela earn?

Lm _____

(4 marks)

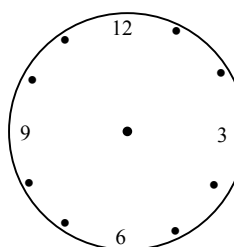
5a) Fill in:

(i) ____ months = 1 year

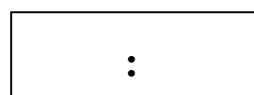
(ii) ____ minutes = 1 hour

b)

- (i) A school athletics competition started at **9.30 a.m.**
Show this time on the clock face.

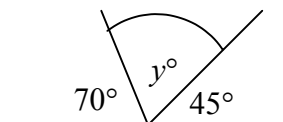


- (ii) The competition finished at a **quarter to two** in the afternoon.
Give this time on a **24hour clock**.



(4 marks)

6a) What is the value of y ? (The diagram is not drawn to scale)



_____°

b) This shape has all **sides equal**.

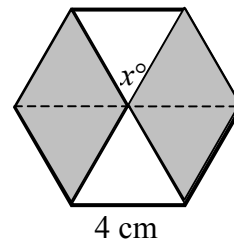
(i) Write the fraction shaded.

(ii) What is the **perimeter** of the shape?

_____ cm

(iii) Find the value of x° .
(Show working)

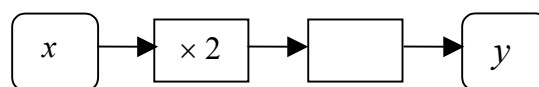
_____°



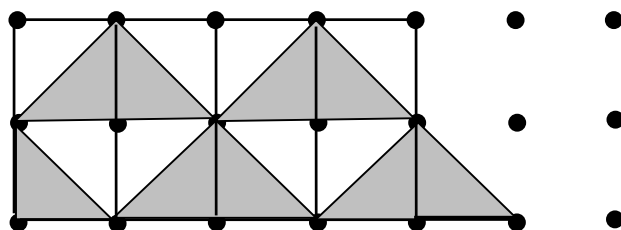
(6 marks)

7a) Complete the **table** and **function machine**:

x	4	5	6	7
y	7	9	11	_____



b) Complete the pattern of tiles.



c) The **type** of triangle used is _____ (isosceles, scalene, equilateral).

(6 marks)

8. Six children jump these distances.

Ivan 1 m 8 cm

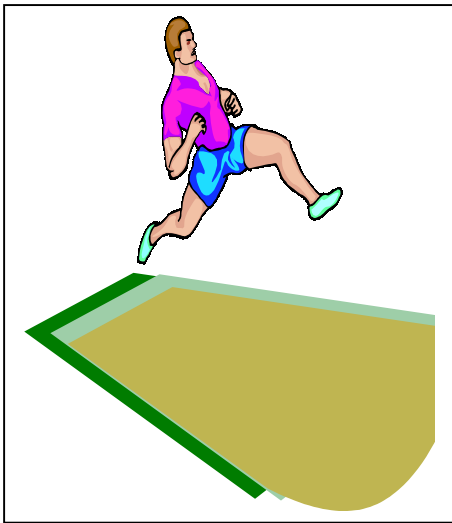
Alan 1.45 m

Mav 1.50 m

Esther 96 cm

Pat 1m 75 cm

Paul 1.52 m



Fill in:

- Ivan's jump in **metres** is _____ m.
- Is Alan's jump **nearer** 1 metre or 2 metres? _____m.
- _____ and _____ jumped **more** than one and a half metres.
- The jump lengths in order, **from the shortest** to the longest, are:

(6 marks)

9. The pointer shows the weights of parcels X and Y.

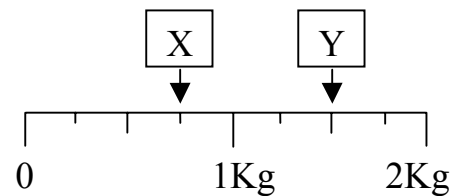
If 1 kg = 1000 g

a) Weight of parcel X = _____ g

b) Weight of parcel Y = _____ Kg _____ g

c) Parcel Y is heavier than parcel X by

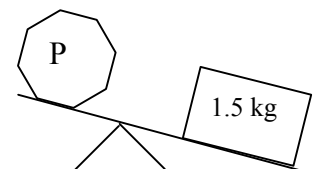
_____ g



d) Another parcel P weighs somewhere between 1.4 kg and 1.5 kg. Give two numbers that could be its weight.

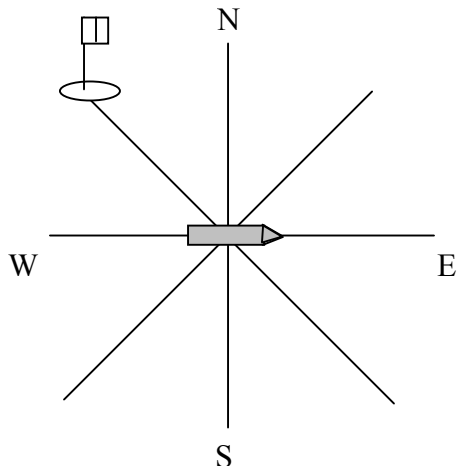
_____ kg

_____ kg



(6 marks)

10.



A ship starts sailing towards **East**.

a) In which direction will it be sailing, after it turns **from East** one right angle **anticlockwise**?

b) How many **right angles** must it turn to face exactly the **opposite** direction from where it started?

_____ right angle/s

c) Mark "**P**" **on the diagram** to show the ship's new position after it turns 45° **clockwise**, starting from East.

d) The ship starts facing East. Through how many **degrees** must it turn anticlockwise to face the marker with the flag?

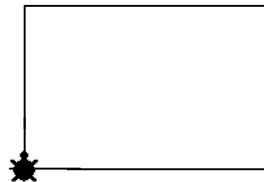
_____ $^\circ$

(6 marks)

11a) The turtle draws this rectangle following a set of nine commands.
Some are missing; fill them in.

PD
FD 20 RT 90
FD 30

FD 30 RT 90



b) The turtle can draw the same rectangle with fewer commands.
Fill in.

PD Repeat (FD 20 RT 90 FD RT)

c) How many steps did the turtle move **in all**?

_____ steps

(8 marks)

12a)



The **area** of the rectangle is 32 cm^2 . One of the sides is 8 cm long.

What is the length of the other side?

_____ cm

b) Measured from the inside, this box is 2 cm by 4 cm by 5 cm.

(i) The box is in the shape of a _____ (cube, cuboid, pyramid).

(ii) How many edges are 2 cm long? _____ edges.

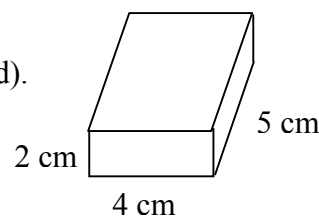
(iii) How many 1 cm cubes would fill it completely?

_____ cubes.

(iv) The box has 8 _____ (edges, faces, vertices).

(v) The box has 6 _____ (edges, faces, vertices).

(8 marks)

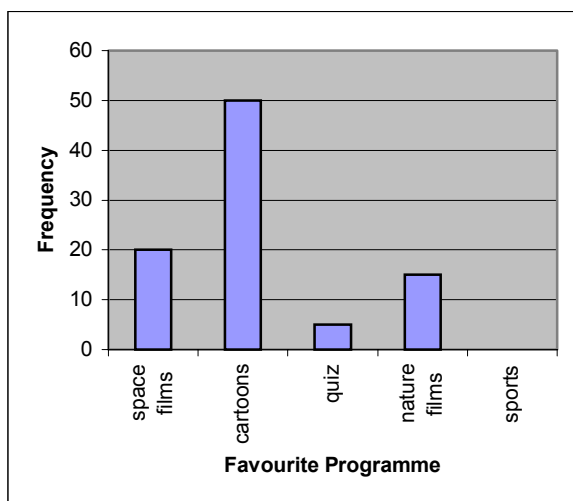


13. The bar chart shows the favourite programmes of the 120 children in a school.

a) Complete the (i) **table** and (ii) **bar chart**.

Fav. Programme	Space Films	Cartoons	Quiz	Nature Films	Sports
Frequency	20	50		15	30

b) **Fill in** the spaces using the information given in the chart and table.



(i) The favourite programme is _____.

(space films, cartoons, quiz, nature films, sports).

(ii) Which is the least popular? _____

(space films, cartoons, quiz, nature films, sports).

(iii) The total number of children in the school is 120. What **fraction** of the children prefer to watch a space film?

$\left[\frac{1}{6}, \frac{1}{5}, \frac{1}{4}, \frac{1}{3} \right]$

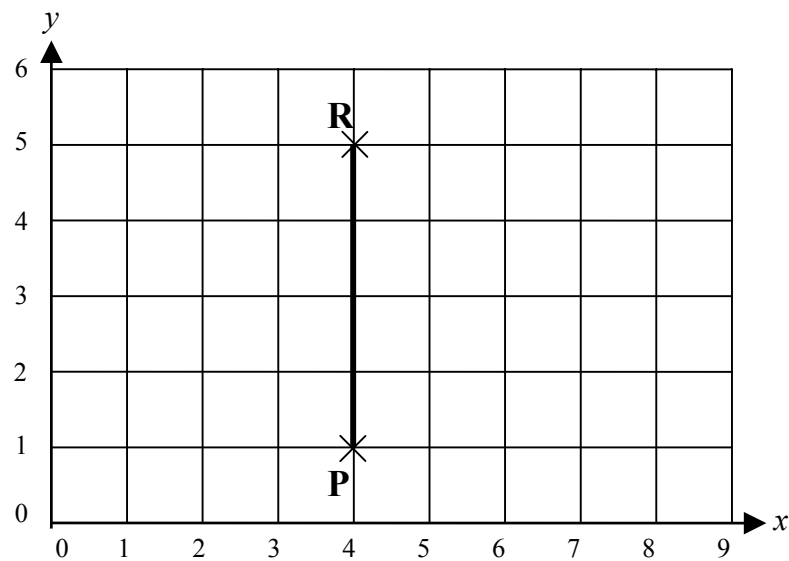
(iv) What **percentage** of the children prefer sports?

_____ % prefer sports

(4%, 25%, 30%, 40%).

(8 marks)

14.



a) Give the co-ordinates of

P (,) and R (,)

b) Plot the point Q (2, 3).

c) Join P to Q and Q to R.

d) Complete the 4-sided figure PQRS so that line RP is a line of symmetry.

e) Mark point S on the graph and give its co-ordinates .

S (,)

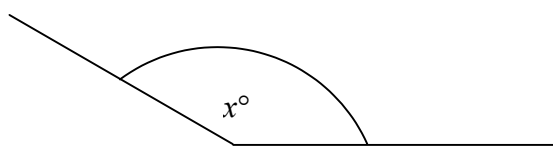
f) What is the name of the shape PQRS?

Shape PQRS is a _____ (triangle, square, rectangle, kite).

(8 marks)

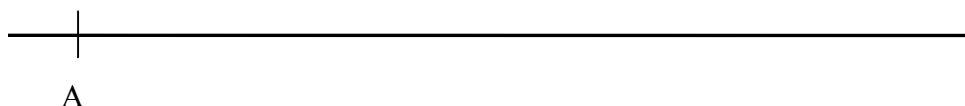
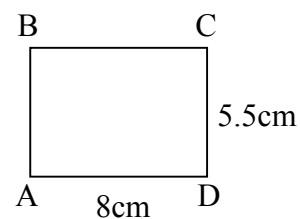
15a)

Use a protractor to measure the angle.



$x =$ _____[°]

- b) (i) With the help of a ruler and a protractor draw the rectangle ABCD with sides measuring 8 cm and 5.5 cm. Label your diagram.



- (ii) Use arrows to mark on your diagram two sides that are **parallel**.

- (iii) Side AB and side _____ are **perpendicular**.

(8 marks)

END OF PAPER

