

## SPECIAL ITEMS

### P.7 MATHEMATICS

*Time allowed: 2hours 30minutes*

Candidate's Name: .....

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#### SECTION A

1. Work out:  $105 \times 3$

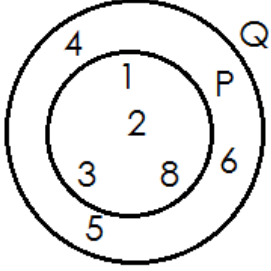

2. Given that set  $A = \{1, 2, 3, 4, 5\}$ , find the number of proper subsets of set A.

3. Round off 98.983 to the nearest tenths.

4. Change 22 : 35 hours to 12 hour clock system.

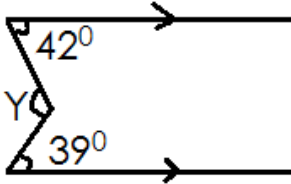
5. Convert 20km/hr to m/s.

6. Find the next number in the sequence 1, 3, 6, 10, 15, \_\_\_\_\_

<p>7. Using a pair of compasses, a ruler and a pencil only construct an angle of <math>45^\circ</math>.</p>	<p>8. Find <math>n(P)^1</math></p> 
<p>9. Use a distributive property to work out: <math>(4.5 \times 145) \div (45 \times 4.5)</math></p>	<p>10. Write 6,000,606 in words.</p> <p>11. The mean weight of 3 boys is 24kg. When the 4<sup>th</sup> boy joins the group the mean weight of 4 boys becomes 21kg. Find the weight of the 4<sup>th</sup> boy.</p>
<p>12. Show lines of folding symmetry in the drawn figure.</p> 	<p>13. Write XCVI in Hindu Arabic numerals.</p>

14. How many minutes are there between 11:50am and 1:45pm?

15. Find the size of angle marked Y in the diagram below.



16. In a school the ratio of girls to boys is 4:5 respectively. If there are 180 boys, how many pupils are there altogether?

17. A red car is packed in the 9<sup>th</sup> position from either sides of the line. How many cars are parked?

18. If today is Tuesday, what day of the week will it be 42 days from today?

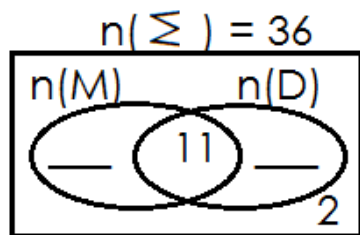
19. Simplify  $18x - 9 - 6x - 5$

20. Convert 0.0444.....to the common fraction of its simplest form.

21. At a farewell party of 36 candidates,  $x$  candidates likes Music (M) only, 11 candidates likes both Music and Drama (D), 22 candidates liked Drama while 2 candidates liked neither Music nor Drama.

a) Show the above information on a Venn diagram. (2mks)

b) Find the number of candidates who liked Music only. .



c) If a candidate is picked at random, what is the probability of picking a candidate who likes Drama only? (1mk)

22. Joel spent  $\frac{1}{3}$  of his pocket money on pens,  $\frac{1}{6}$  of the remainder on books and saved the rest.

a) What fraction of his pocket money did he save? (2mks)

b) If he saved shs.27,000 how much did he have at first? (3mks)

23. A motorist moved at an average speed of 60km/hr for 3 hours from town P to town Q. On the return journey, he travelled at an average speed of

90km/hr.

a) How far is town P from town Q?

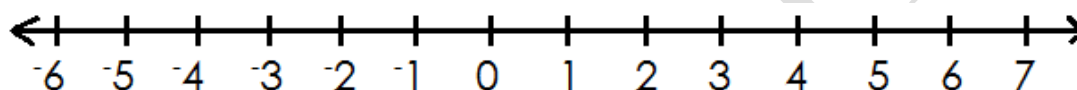
(2mks)

b) Calculate his average speed for the whole journey.

(3mks)

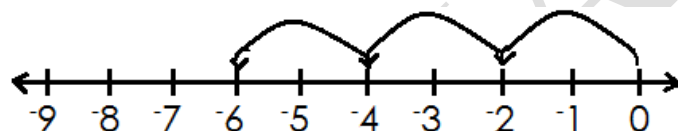
24. Use the number line below to work out  $-2 - +3$

(2mks)



b) Write the multiplicative statement shown on the number line.

(2mks)



25. Below is the frequency table that shows marks scored by pupils in P.7 marked out of 60.

<b>Marks</b>	35	20	30	15	25
<b>No. of pupils</b>	5	3	1	4	2

a) How many pupils are in the class?

(1mk)

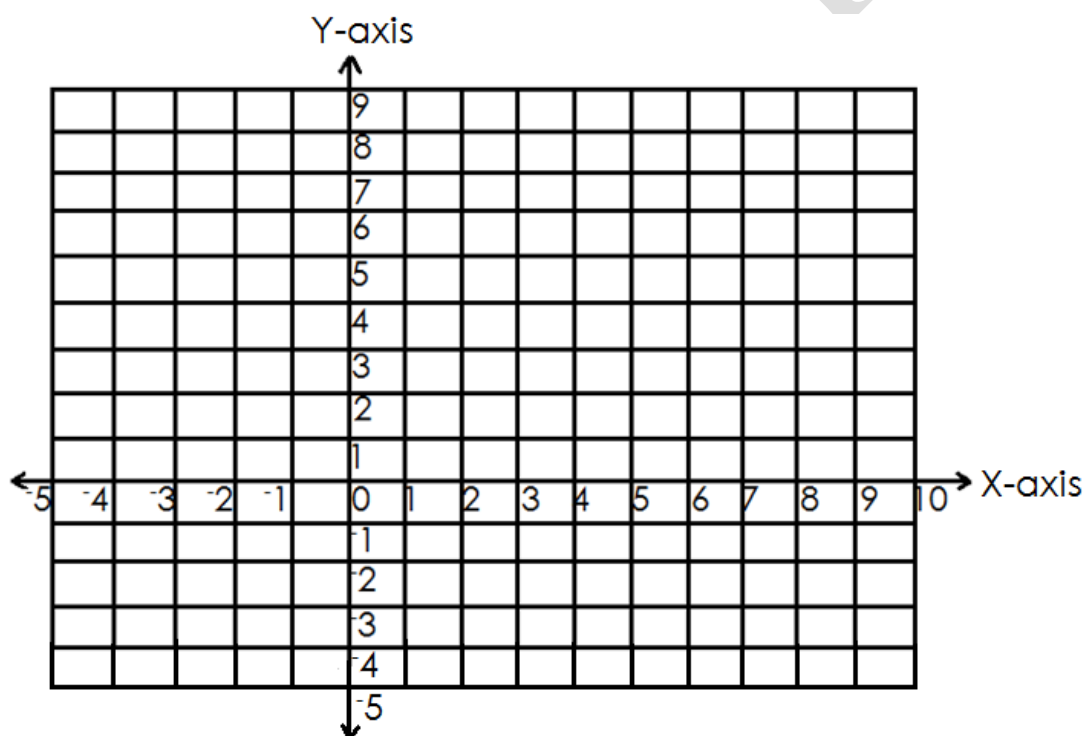
b) What is the modal frequency? (1mk)

c) How many pupils scored above the mean mark? (2mks)

26. On the grid below plot the following points.

(4mks)

a) W(-1, 2) X(3, 2) Y(-1, -2) Z(3, -2)



b) Join w to x, x to y, y to z and z to w and name the figure formed. (1mk)

c) Calculate the area of the figure formed. (1mk)

27. Tendo went to a shop and bought the following

- 4kg of beans at 12000 shillings
- 4kg of sugar at 2500 shillings each kg
- 500g of salt at 1300 shillings per kg
- 3 bars of soap at 3000 shillings each bar

a) How much did she spend altogether?

(2mks)

b) If Tendo had a fifty thousand shillings note, what was her change? (2mks)

28. Stephen, David and Geoffrey shared some money in the ratio of 4:6:5 respectively. If David got sh.2,000 more than Stephen,

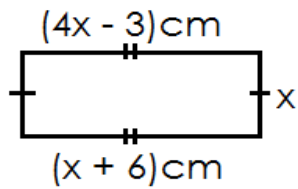
a) How much money was shared?

(2mks)

b) How much did each of them get?

(3mks)

29. Study the rectangle below and answer the questions.



a) Find the value of  $x$ .

(2mks)

b) Calculate the area of the rectangle.

(3mks)

30(a) Work out:  $\frac{0.4 + 2.4}{0.7}$

(3mks)

b) Given that  $P = \frac{2}{3}$  and  $R = \frac{1}{9}$ , find the value of  $\frac{P}{R}$ . (2mks)



31. Using a pair of compasses, a ruler and a pencil. Construct a triangle ABC such that  $AB = 6\text{cm}$ , Angle  $ABC = 120^\circ$  and angle  $A = 30^\circ$ , drop a perpendicular from C to meet AB at point N. (5mks)

b) Measure line segment CN. (1mk)

32(a) Solve the inequality and find solution set  $2m - 5 \leq 7$  (2mks)

b) Solve  $2x + 3 = 1 \pmod{7}$  (2mks)