HORMISDALLEN SCHOOLS
EXAMINATIONS BOARD
PRE- PLE EXAMS, 2024(SPECIAL SET 6)
PRIMARY SEVEN
<u>MATHEMATICS</u>
Time allowed: 2 hours 30 minutes

Index No.

Candidate's Name: _____

Candidate's Signature: _____

School Name: _____

Read the following instructions carefully:

1. The paper has **two** sections: **A** and **B**

2. Section **A** has 20 short questions (40 marks)

3. Section **B** has 12 questions (60 marks)

4. Answer **ALL** questions. All answers to both Sections A and B must be written in the spaces provided.

5. All answers must be written using a blue or black ball point pen or ink. Diagrams should be drawn in pencil.

6. Unnecessary alteration of work may lead to loss of marks.

7. Any handwriting that cannot be easily read may lead to loss of marks.

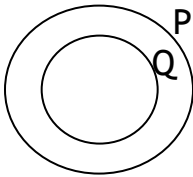8. Do **not** fill anything in the boxes indicated for Examiner's use only.

Turn over

SECTION A: (40 MARKS)

1. Multiply: 221 x 4
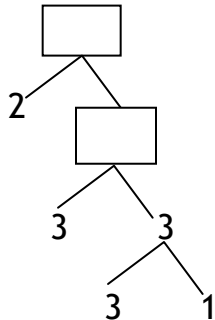

2. Write 50,050 in words.

3. Shade P – Q in the diagram below.

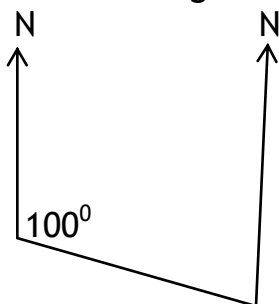4. Divide: 1616 by 16

5. Complete the factor tree below.

6. What is value of the underlined digit in 463.7$\underline{8}$?

7. 4 litres of milk cost sh. 4000. What is the cost of 10 ½ litres?

8. Use the diagram below to find the bearing of town B from town A.

B

A

9.　Simplify: $\dfrac{5}{8} - \dfrac{3}{8}$

10.　Given that 🍍 represents 5 ½ pineapples. How many pineapples are

represented by 🍍 🍍 🍍 🍍 ?

11.　Show 25 minutes to 3 O'clock on the clockface below.
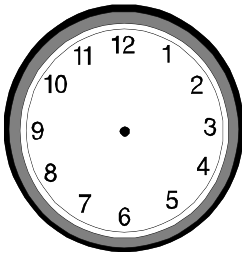
12.　Subtract 2x – 5 from 3x + 4.

13.　Using a ruler, a pencil and a pair of compasses only, draw a line PQ 6cm long and bisect it.

14.　How many circular plates of diameter 4cm can be cut out of the metallic sheet shown below?

12cm

25cm
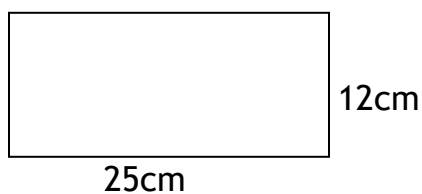
15. In a school of 800 pupils, the ratio of boys to girls is 1:3. What is the number of girls in the school?

16. Work out: 2 x 7 = _____ finite 5.

17. Find the value of p in the triangle below.
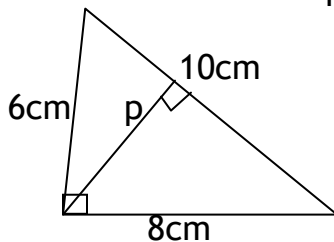
18. Given that x = 4 and y = 8. Find the value of $\frac{x}{y}(x + y)$

19. The probability of picking a girl to sweep the class is $\frac{2}{5}$. If there are 150 pupils, find the number of boys.

20. Write the mathematical statement shown on the number line below.

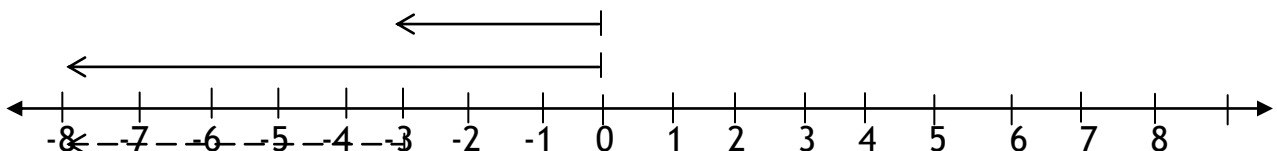21a) Using the numeral 76.58, find the product of the place values of 7 and 5.

(2 marks)

(b)   Write the number whose scientific notation is 9.85×10^3.   *(2 marks)*

(c)   Subtract 11_{two} from 101_{two} *(1 mark)*

22.   In a class, 8 pupils like English (E) only, 2p pupils like SST (S) only, (p + 7) pupils like both subjects and (p-3) pupils do not like any of the two subjects.

(a)   Use the above information to complete the venn diagram below.

n(ε) = Z   *(1 mark each)*
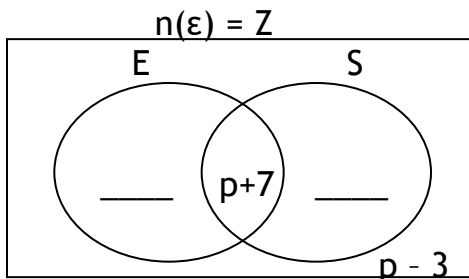
(b)   If 21 pupils do not like English, find the value of p.   *(2 marks)*

(c)   Find the value of Z.   *(2 marks)*

23(a) Solve for x: $\dfrac{1}{2}(3x - 2) = \dfrac{2}{3}(2x + 3)$ *(3 marks)*

(b)   Solve and find the solution set for the inequality below.   *(3 marks)*
$6 - p \leq 3$

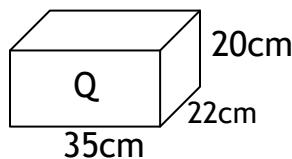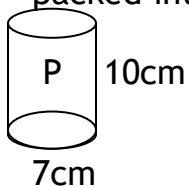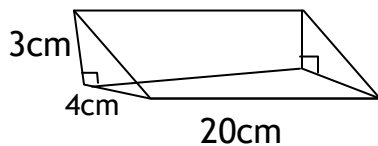24a) Work out: $\dfrac{0.35 + 2.65}{0.03}$ *(2 marks)*

(b)   Work out : $\dfrac{4}{5} - \dfrac{1}{2}$ x $\dfrac{1}{3}$ *(2 marks)*

25a) How many cylindrical tins P of diameter 7cm and height 10cm can be packed into cuboid Q.   *(2 marks)*

P 10cm

7cm

20cm

Q

22cm

35cm

(b)   Find volume of the triangular prism below.

3cm

4cm

20cm   *(2 marks)*

26.   Construct a regular pentagon of side 5cm.   *(5 marks)*

27. Kato bought the following items from a supermarket as shown on the table.

a)   Complete the table below.   *(1 mark each)*

Item	Quantity	Unit cost	Total cost
Rice	2 ½ kg	Sh. 3000 per kg	Sh. ……………………
Soap	2 bars	Sh. ………….. per bar	Sh. 7000
Milk	………… litres	Sh. 900 per half litre	Sh. 2700
		Total	Sh. ……………………

b)   If he paid sh. 13760 after a discount, calculate his percentage discount.
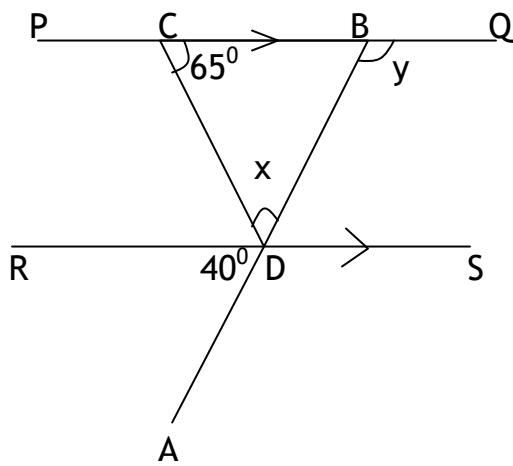
(2 marks)

28   A shopkeeper sold a belt to John for sh. 6300 making a loss of 10%. John sold the same belt to Sam making a profit of 20%.

(a)   Calculate the amount of money the shopkeeper paid for the belt. *(2 marks)*

(b)   How much did Sam pay for the belt?   *(2 marks)*

29.   In the figure below PQ is parallel to RS. Angle RDA = 40^0 and

angle DCB = 65^0. Study and use it to answer questions that follow.

Find the size of (a) angle x

(2 marks)

(b)   angle y

(2 marks)

30.   A bus travels between towns A and B which are 240km apart. He travels from A to B at 40km/hr and returns to A at 60km/hr.
       Calculate;

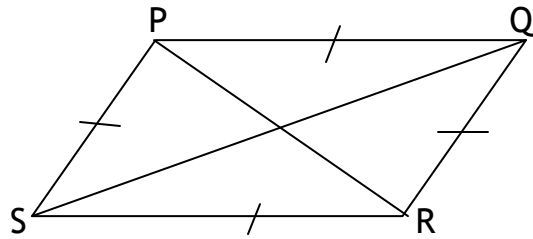(a)   The time taken for the whole journey.   *(3 marks)*

(b)   The average speed for the whole journey.   *(2 marks)*

31. The diagonals of rhombus PQRS are; PR = 10cm

QS = 24cm

(a) What is the area of the rhombus?

(2 marks)

(b) Find the length of QR. *(2 marks)*

32. Study the frequency table below and answer questions that follow.

Marks	Frequency	Total
54	3	162
64	2	_____
_____	3	210
85	_____	340

(a) Complete the table. *(1 mark each)*

(b) Find the median mark. *(2 marks)*

(c) Find the mean. *(2 marks)*

Good Luck