SECTION .A. (40 Marks)

1. Subtract 19 from 200.

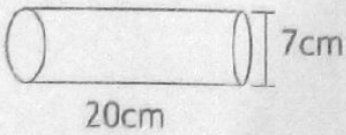
2. Convert 11101_{two} to base ten.

3. Given that A =(all vowels)
   Find n(A)

4. Solve; 4 = ½p

5. Peter ran 100metres in 20 minutes. Express his speed in km/hr.

6. Calculate the total surface area of a cylinder below.



7. Work out the supplement of $(2p-15)^\circ$

8. Convert $\frac{1}{8}$ as a decimal.

9. Given that  represents 60 eggs.

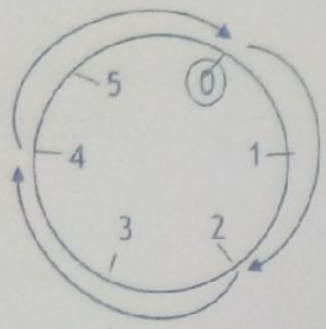
(i) How many eggs are represented by  ?

(ii) Draw pictures to represent 150 eggs.

10. Calculate the number of sides of a regular polygon with 14 right angles.

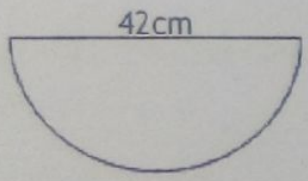
11. The bearing of a school gate from the school demonstration garden is 220^0. Find the bearing of the school demonstration garden from the school gate. (Use a sketch diagram)

12. Write the finite multiplication statement shown on the dial below.



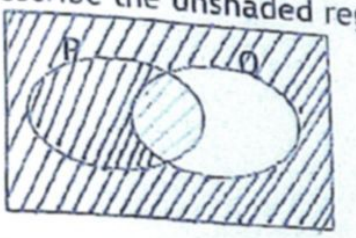
13. The cost of a dozen bic pens is sh. 6000. What is the cost of 8 similar pens?

14. Find the perimeter of a semicircle below. (Take $\pi = \frac{22}{7}$)



15. If a dice is tossed a dice once, what is the probability that a factor of 4 will show up?

16. Describe the unshaded region below.



17. Kato attended a lesson at 22 minutes past midday. Express this time in 24hour clock.

18. A cuboidal tank measures 40cm long, 20cm wide and 60cm high. Work out its base area.

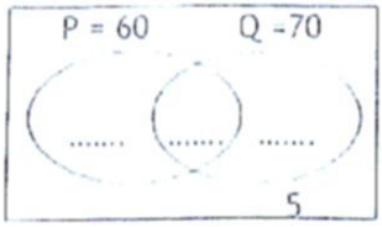
19. Find out the average of 2y, 4, 0 and 6y.

20. A water tank is $^{5}/_{7}$ full of water. When a fifth of the water in the tank was drawn, it remained with 280 litres. Find the fraction of water that remained.

SECTION .B. (60 Marks)

21. Given that $n(P) = 60$, $n(Q) = 70$, $n(P-Q) = 50$ and $n(P \cup Q)' = 5$.

(a) Complete the venn diagram.



$\Sigma =$

(b) Find $n(P \cap Q)'$

(05 marks)

22. Below is a rectangular garden which measures 60m by 110m.

(a) Find the distance around the garden.

(b) If the owner wants to fence it using intervals of 2.5m from one pole to another, how many poles will he need?

(c) Find the maximum length of barbed wire needed to fence around the garden four rounds.

(06 marks)

23. (a) Show 203_{five} on the abacus.

(b) Given that $n^2 + 3 = 103_{seven}$, find the value of n.

(05 marks)

24. (a) Using a ruler a pencil and a pair of compasses only, construct a triangle PEN where line PE = 6.0cm, EN = 5.5cm and angle PEN = 135^0.

(b) Drop a perpendicular line from point N to meet the extension of line PE at X. Measure line NX and find the area of the triangle PEN.

(6 marks)

25. A farmers' SACCO offers an interest rate of 2.5% per month. Alex borrowed sh. 1,180,000 from the SACCO and used it for 1½ years.
(a) Calculate the interest the SACCO earned from him.

(b) How much money did he pay back at the end of the period?

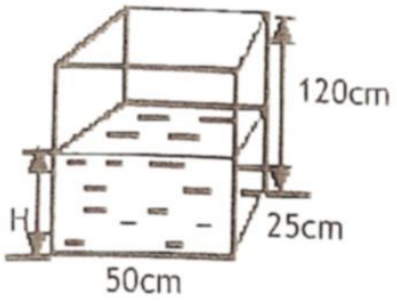
(05 Marks)

26. The bells for changing lessons at Ntare P/S ring at intervals of 40minutes and 50 minutes for lower and upper Primary respectively. They first ring together at 8:00am when lessons start and will ring together again at break time.
(a) How many lessons will each section have learnt by break time?

(b) At what time will the bells ring together for the third time?

(05 marks)

27. Given that the tank below is a third full of water. Use it to answer questions that follow.



(a) Find the value h in centimeters.

(b) How many litres of water are in the tank?

(c) How many litres of water are required to completely fill the tank?

(05 marks)

28. (a) Simplify: 10p - 12y + 4y - 8p

(b) Solve: $\frac{5}{h-4} = \frac{8}{h+2}$

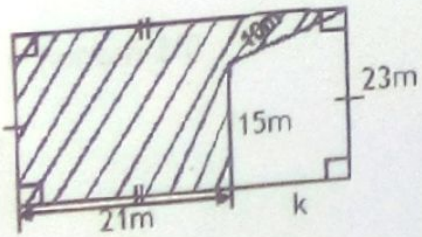
29. (a)When the teacher distributed textbooks in class in groups of 5, 4 books remained while in groups of 8, 2 books remained. How many books did the teacher have?

(b) Today is Wednesday 3rd November, 2022. What day of the week will it be on 9th December the same year?

(04 marks)

30. Study the diagram below and answer questions that follow.

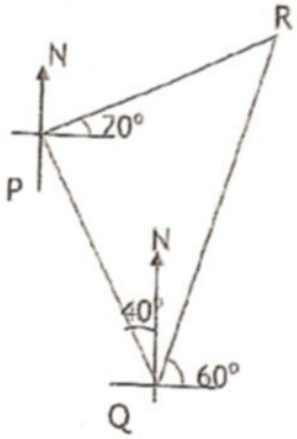
(a) Find the value of k.



(b) Work out the area of the shaded part.

(06 marks)

31. Using the diagram below to answer questions that follow.



(a) Work out the bearing of;

(i) R from P

(ii) P from Q

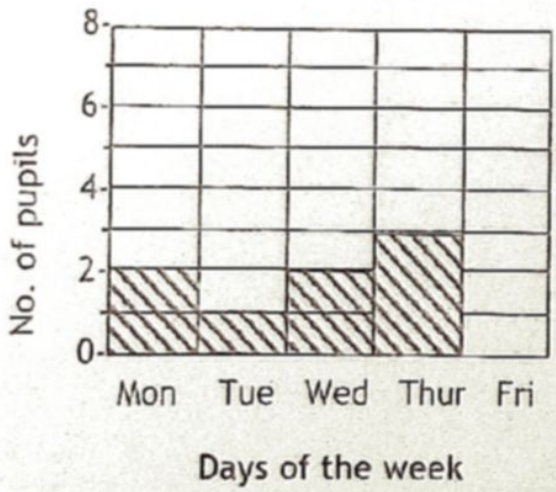
(b) Find the direction of;

(i) Q from R

(ii) P from R

(04 marks)

32. The graph below shows the number of absentees for P.4 class last week. There are 58 pupils in P.4 class.



(a) On which day was the least number of pupils absent?

(b) How many pupils were present on Tuesday?

(c) Calculate the average attendance of that week?

(04 marks)

END