1. A bottle of Cowbell milk is emptied into eight cups, each of which holds 150ml. How many litres of milk were in the bottle?
   A.1.0 litre   B.1.2 litres C.1.5 litres
   D.2.0 litres   E.2.4 litres

2. Eight people share a prize and receive N125 each. How much would each have received if there had been only five prize winners ?
   A.N150   B.N200   C.N240
   D.N250   E.N280

3. Mr. Dauda invested N10,800 and at the end of each year he withdrew the interest. After 4 years he had withdrawn a total of N3240 in interest. At what annual rate of interest was his money invested ?
   A.$5\frac{2}{3}$%   B.$5\frac{1}{2}$%   C.$6\frac{1}{3}$%
   D.$7\frac{1}{4}$%   E.$7\frac{1}{2}$%

4. At the end of a football season the bottom team in division 3 has 34 points. The range is 52 points. How many points has the top club?
   A.18 B.28 C.54 D.64 E.86

5. John drives along a road which has two sets of traffic lights. The probabilities of their being green are $\frac{3}{4}$ and $\frac{2}{5}$ respectively.What is the probability of John finding both sets not green?
   A.$\frac{3}{10}$ B.$\frac{3}{20}$ C.$\frac{7}{10}$ D.$\frac{7}{20}$ E.$\frac{5}{12}$

6. The probability of Cowbell Football Club winning a match is $\frac{2}{3}$ .They play two matches.What is the probability that they win both matches?
   A.$\frac{1}{3}$ B.$\frac{2}{3}$ C.$\frac{2}{5}$ D.$\frac{3}{7}$ E.$\frac{4}{9}$

7. A rectangle has a length which is double its width.The perimeter of the rectangle is 18cm. Find the width of the rectangle?
   A.2cm B.3cm C.4cm D.5cm E.6cm

8. Victoria cut an apple in three pieces. One piece is 8g lighter than the largest piece and 5g heavier than the smallest piece. If the apple weighs 360g, how much does the smallest piece weigh?
   A.85g   B.100g C.114g
   D.124g   E.130g.

9. This year, Paul is three times as old as Peter, but in four years time Paul will be twice as old. What is the sum of the ages of Paul and Peter now?
   A.12 B.14 C.16 D.18 E.24

10. In a mathematics test, Ade scored 3 more marks than Biola who scored 5 marks more than Leye.The total of their three scores was 139. How many marks did Leye score?
    A.50 B.47 C.42 D.40 E.38

11. $S = \frac{1}{2}n(n + 1)$ is a formular which gives the sum of the positive integers from 1 to n.Find the sum of the first 50 positive integers.
    A.680 B.850 C.960 D.1040 E.1275

12. Two numbers are chosen such that twice the first plus the second is 17 and four times the first minus the second is 25. Find the sum of the two numbers?
    A.7   B.8   C.9   D.10   E.11

13. The perimeter of a rectangle is 38 metres.The difference between the length and the breadth is 3 metres. What is the area of the rectangle?
    A.64m^2 B.68m^2 C.76m^2
    D.88m^2 E.96m^2

14. A carpet is 3m too long for a square floor in one direction and 1m too short in the other. The area of the carpet is 21m^2. Find the area of the floor?
    A.8m^2 B.12m^2 C.16m^2 D.20m^2 E.24m^2

15. The handle of a cup is an arc of a circle which subtends an angle of 176^0 at the centre. The length of the handle is 9cm. Find the radius of the circle of which the handle is an arc.
A.1.56cm   B.2.93cm   C.3.14cm
D.3.68cm   E.4.01cm

16. The area of a pentagon is $38cm^2$. The pentagon is enlarged by scale factor of 5. Find the area of the new shape?
A.190cm^2 B.280cm^2 C.540cm^2
D.730cm^2 E.950cm^2

17. The area of a quadrilateral ABCD is $31cm^2$. The quadrilateral is enlarged by scale factor of $\frac{1}{2}$. Find the area of the new shape ?
A.15.5cm^2 B10.8cm^2 C.9.65cm^2
D.7.75cm^2 E.6.55m^2

18. A semicircle has an area of $108m^2$. It is enlarged to a semicircle of area $192m^2$. In what ratio are the diameters of the two semicircles?
A.1:2   B.2:3   C.3:4   D.4:5   E.5:6

The dimensions of a giant ice cream cone are $1\frac{1}{2}$ times those of a small cone.
Use the information above to answer questions 19 and 20.

19. The volume of ice cream in the small cone is 112cm^3.How much ice cream does the giant cone hold?
A.168cm^3 B.246cm^3 C.378cm^3
D.410cm^3 E.440cm^3

20. If the price of a small cone is 60k, what should the ice cream vendor charge for a giant cone?
A.90k   B.N1.10k   C.N2.02k
D.N2.80k   E.N3.10k

21. The exterior angle of a regular polygon is 20^0. How many sides does it have?
A.15   B.16   C.17   D.18   E.19

22. The angle of elevation of the top of a tree from point P is 7^0. After walking 30m towards the tree, the angle of elevation becomes 9.1^0. Find the height of the tree.
A.15.9m   B.12.6m   C.12.8m
D.11.7m   E.10.6m

23. If $8x - 4 = 6x - 10$, Find the value of $5x$.
A.12   B.-12   C.15   D.-15   E.25

24. On a journey of 300km,the train driver calculates that if he reduces his average speed by 10km/h he would take 25 minutes longer. Find his average speed.
A.60km/h   B.70km/h   C.85km/h
D.90km/h   E.100km/h

25. If $2x + y = 7$ and $3x - 2y = 3$, by how much is 7x greater than 10?
A.2   B.3   C.5   D.6   E.7

26. Of the pupils in a class,15 can spell 'parallel' 14 can spell 'pythagoras', 5 can spell both words and 4 can spell neither. How many pupils are there in the class?
A. 18 B. 24 C.26   D.28 E.32

27. The first term of an arithmetic progression is 62 and the fifth term is 74. Find the common difference.
A.2   B.3   C.4   D.5   E.12

28. A worker's income increases in the ratio 49:43. Find the percentage increase.
A. 10% B.12% C.14% D.16% E.20%

29. 50 sheep eat a quantity of grass in 15 weeks. How many sheep would eat the same quantity in 8 weeks ?
A.64   B.72   C.78   D.86   E.94

30. Mrs Ajose took a loan of N25,000.00 at 2% compound interest for 10years. How much interest did she pay to the nearest naira?
A.N5475   B.N4625   C.N4230   D.N3975   E.N2925

31. The profit of a business was divided between two partners A and B in the ratio 3:5. If B received N3,000.00 more than A. What is the total profit?
A.8,000   B.10,000   C.11,000   D.12,000   E.14,000

32. If 33% of a number is 1386, find 42 % of the number?
A.1764   B.1000   C.2100   D.1089   E.1674

33. Find the missing number in the addition of the following numbers in base seven
```
  4 3 2 1
  1 2 3 4
  x x x x
  6 6 1 3
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A.3453   B.5556   C.6016   D.1025   E.2405

34. Find the coefficient of x in (3x- 8) (3x+8)
A.24   B.9   C.6   D.0   E.-24

35. If two vertically opposite angles are complementary and the adjacent angle to one of the complementary angles is 3x, find the value of x.
A. 180^0 B. 135^0 C. 75^0 D. 45^0 E. 30^0

36. The weight of a boy is x kg. His father is three times his weight. His sister is half his weight. If the difference in weight between his father and sister is 50kg, find the weight of the boy.
A.50kg   B.40kg   C.30kg   D.25kg   E.20kg

37. By how much is 2.065 corrected to one decimal place bigger than correcting it to the nearest whole number?
A.0.1   B.0.01   C.0.001   D.0.0001   E.1

38. The H.C.F. of 84 and another number is 21.The L.C.M. of the two numbers is 252. What is the second number?
A.63   B.54.   C.49   D.41   E.37

39. Find the difference between the sum of $2\frac{3}{8}$ and $3\frac{1}{8}$ with their difference.
A.$1\frac{1}{3}$ B.$2\frac{1}{4}$ C.$3\frac{3}{4}$ D.$4\frac{3}{4}$ E.$5\frac{2}{3}$

40. The mean of 5 numbers is 50 and the mean of 4 of these numbers is 45. What is the 5th number?
A.5   B.8   C.25   D.55   E.70.

PART 2

1. The curved surface area A of a cone of height h and base radius r is given by
$$A = \pi r\sqrt{h^2 + r^2}$$

Make h the subject of the formula.

2. A car accelerates steadily from rest to a speed of 20 metres per second in 10 seconds and then at a steady speed for 20 seconds.
(a) Draw the speed - time graph of the car.
(b) Calculate the acceleration, in metres per second per second in the first phase of the journey.
(c) Calculate the distance travelled by the car in 30 seconds.