PENPLUS SCHOOL BASED EVALUATION TEST
STD 7 - TERM 3 -
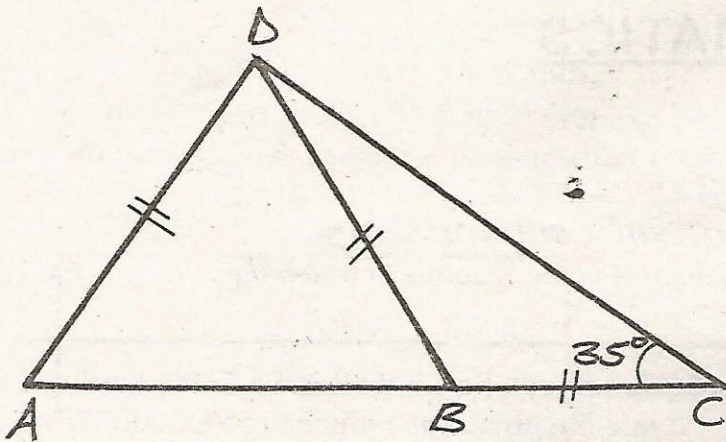## MATHEMATICS

PENPLUS MK-3

TIME: 2Hours

READ THESE INSTRUCTIONS CAREFULLY

1. Use only an ordinary pencil.
2. Make sure that you have written on the answer sheet:-
   (I) YOUR NAME   (II) NAME OF YOUR SCHOOL
3. For each question show the correct answer by drawing line in the brackets in which the letter you have choosen is written.
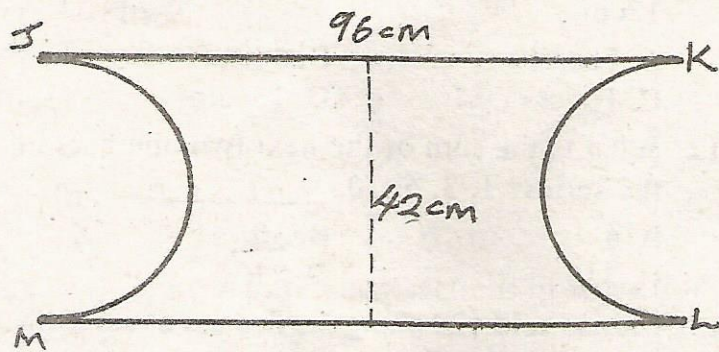
1. Write five million, fifty thousand five hundred and five in figures.
   A. 5500505   B. 5050505
   C. 5505050   D. 50050505

2. In the number 14205, what is the difference between the total value of the digit 4 and 2?
   A. 200   B. 4200   C. 3800   D. 4000

3. What is $\frac{1}{2}$ of $\frac{2}{5}(6 \times 2 \div \frac{3}{4}) + 4$
   A. $10\frac{2}{5}$ B. $3\frac{1}{5}$
   C. $5\frac{1}{5}$ D. $7\frac{1}{5}$

4. Find the square root of $\sqrt{10\frac{6}{25}}$
   A. $3\frac{1}{5}$ B. $\frac{5}{16}$
   C. $2\frac{6}{5}$ D. $2\frac{1}{5}$

5. A bucket, a jembe and a panga cost p, 3p + 3 and 2p + 4 shillings respectively. What was the total cost of the items?
   A. Sh (6p + 7)   B. Sh (6p − 1)
   C. Sh (p + 7)   D. Sh 6p

6. What is 867953 rounded to the nearest ten thousands?
   A. 870900   B. 870000
   C. 900000   D. 868000

7. Work out: $1.792 \div 0.07 =$
   A. 25.6   B. 256   C. 2.56   D. 2560

8. What is the value of:
   $(0.4 + 0.8 + 0.2)^2$
   A. 196   B. 19.6
   C. 1.96   D. 1.4

9. A car travelled at an average speed of 120km/hr. What was this speed in meters per second?
   A. 200m/s   B. 3.33m/s
   C. 33.3m/s   D. 432 m/s

10. The price of a football is Sh 2400. During a sale the price was reduced to Sh 2000. What was the percentage decrease in price?
    A. $16\frac{1}{3}$ B. 16%
    C. $83\frac{1}{3}$ D. $16\frac{2}{3}$%

11. Find the area of a parallelogram where base length is 13cm and perpendicular height is 12cm.
    A. 78cm^2 B. 50cm^2
    C. 156cm   D. 156cm^2

12. What is the sum of the next two numbers in the series? 1, 3, 6, 10, ____, _____
    A. 6   B. 36
    C. 315   D. 21

13. Mutiso sold 420 mangoes in piles of six at Sh 7.50 per pile. How much money did he get from the sale of mangoes?
    A. Sh 52500   B. Sh 525
    C. Sh 3150   D. Sh 2520

14. Find the value of:
    $7\frac{3}{5} + 1\frac{1}{2} \div 2\frac{1}{2}$
    A. $8\frac{1}{5}$ B. $11\frac{7}{20}$
    C. $7\frac{6}{5}$ D. $\frac{3}{5}$

15. What is the value of x in the inequality below?
    $$\frac{2(x - 6)}{5} > \frac{9}{10}$$
    A. $x > 8\frac{1}{4}$
    B. $x > 8$
    C. $x < 8\frac{1}{4}$
    D. $x < 8$

16. Find the measures of angle CDA given that
    AD = DB = BC

A. 70⁰ → A. 70^0
B. 40⁰

A. 70^0 B. 40^0
C. 75^0 D. 35^0

17. What is the perimeter of the shape below?

A. 132cm   B. 192cm
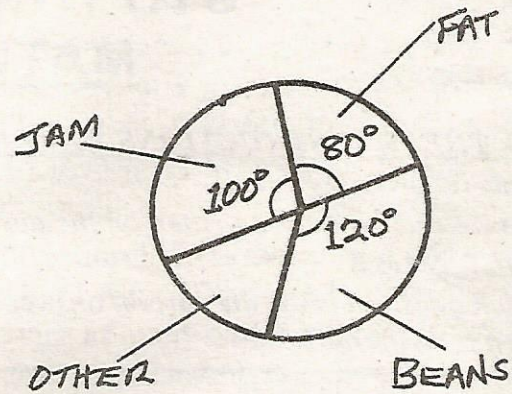C. 276cm   D. 324cm

18. A road can be repaired by 2 men in 10 days.
    How many more men are needed to repair the
    same road in 4 days?

A. 5   B. 3
C. 20   D. 18

19. A river whose length is 5000m in length is
    represented by a length of 5cm on a map.
    Which of the following is the scale of the
    map?

A. 1:10000
B. 1:100000
C. 1:1000000
D. 1:1000

20. The pie chart below represents 120 tins in a
    supermarket. How many tins do "others"
    represent?

A. 220   B. 60
C. 20   D. 160

21. In an election the total number of registered
    voters were sixteen million two hundred and
    four thousand. If eleven million nine hundred
    and eighty four people voted, how many did
    not vote?

A. 27,204,984   B. 27,204,994
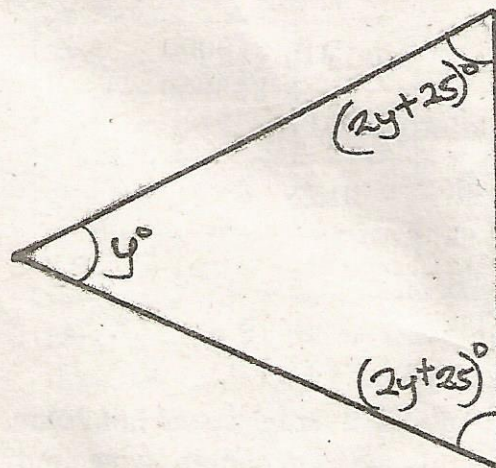C. 5,203,016   D. 5,204,016

22. Work out the following:
    237490 x 923 =

A. 219303270   B. 219203270
C. 119203170   D. 219203170

23. Solve the following equation.
    A. 4(a + ¼) + (2a + 2)½ = 12

A. 5   B. 0
C. 3   D. 2

24. Find the value of y in the figure below.

A. 77^0 B. 26^0
C. 52^0 D. 130^0

25. Find the product of 40% and 2% and convert the answer into a decimal.
   A. 0.08
   B. 0.38
   C. 0.8
   D. 0.42

26. A shopkeeper spent Sh 40,000 to buy five 90kg bags of sugar. He packed all the sugar into 500 packets and then sold each packet at Sh 50.00. What was his percentage profit?
   A. 12½%
   B. 12%
   C. 88%
   D. 82½%

27. What is the value of:

   $$\frac{0.36 \times 1.2}{0.096}$$

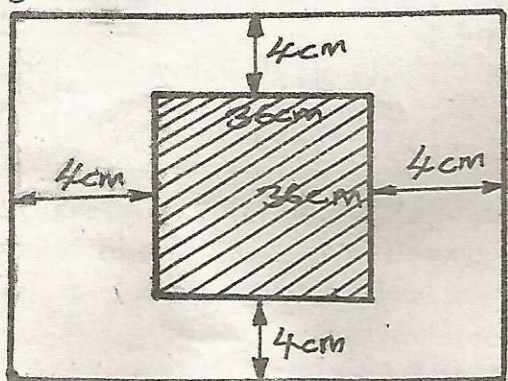   A. 45   B. 4.5   C. 0.045   D. 0.45

28. Which of the following numbers is not divisible by 11?
   A. 2839
   B. 10857
   C. 57651
   D. 2794

29. Beth bought the following items:

   2 dresses @ Sh 250

   3 pairs of socks @ Sh 30

   2 ties for Sh 120

   She paid for these items with four Sh 200 notes. How much more should she have added the shopkeeper in order to receive a balance of Sh 100?
   A. Sh 90
   B. Sh 710
   C. Sh 10
   D. Sh 20

30. Draw triangle PQR in which PQ = 8cm, QR = 7cm and angle PQR = 60°. Drop perpendicular from P and let it meet QR at S. Measure angle SPR.
   A. 24°   B. 55°   C. 31°   D. 65°

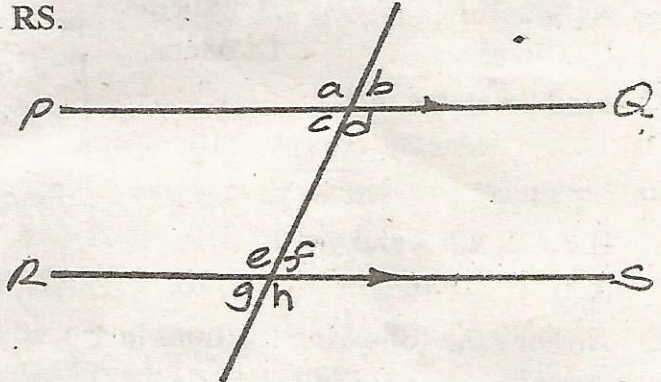31. Find the area of the unshaded part of the diagram below.

   A. 304cm²
   B. 1764cm²
   C. 1296cm²
   D. 468cm²

32. The hire purchase price of a sofa set is Sh 8640. If the hire purchase is 20% more than the cash price, what is the cash price of the sofa set?
   A. Sh 43,200
   B. Sh 10,800
   C. Sh 1,400
   D. Sh 7,200

33. Simplify: ¼(12a –8b) + 1/3(6a + 9b)
   A. a + 5b
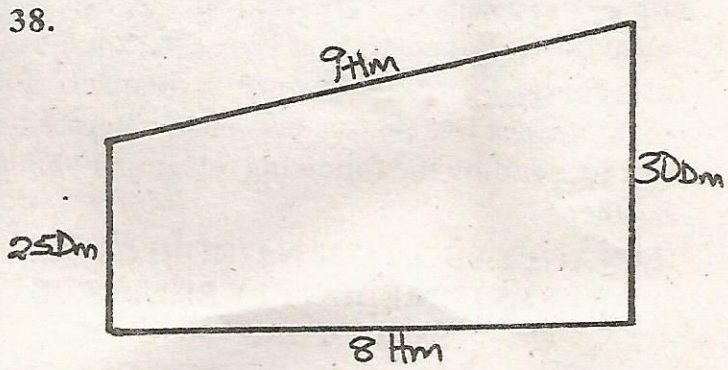   B. 5a – b
   C. 5a + b
   D. a – 5b

34. What is 746.4793 rounded off to the nearest tenths?
   A. 746   B. 747.5   C. 746.48   D. 746.4

35. A cylindrical container has a height of 8.4cm and a radius of 7cm. What is the volume of the container? (Take $\Pi = {}^{22}/_7$)
   A. 154cm³
   B. 184.8cm³
   C. 1293.6cm³
   D. 184.8cm²

36. In the diagram below PQ is parallel to line RS.

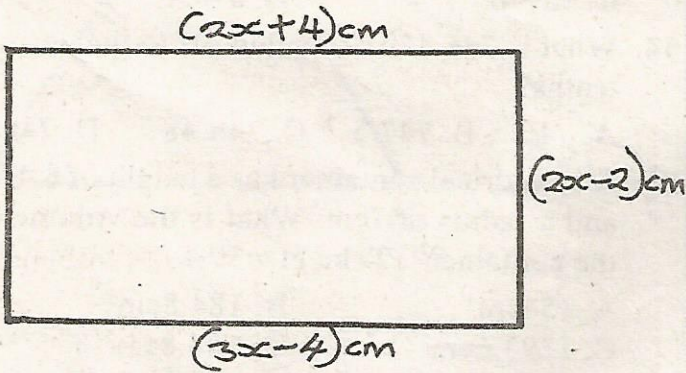
   Which of the following statements is true?
   A. Angle a = angle e
   B. Angle d = angle g
   C. Angle c + angle f = 180°
   D. Angle a + angle e = 180°

37. Hamisi paid Sh 1760 for a radio after a 12% discount. How much was the discount?
   A. Sh 12
   B. Sh 200
   C. Sh 211.20
   D. Sh 240

38.

   Calculate the perimeter of the figure in km.
   A. 72km   B. 2.25km   C. 720km   D. 22.5km

39. Decrease ¾ by 60%

A. $\frac{3}{10}$ B. $3\frac{1}{3}$ C. $\frac{9}{20}$ D. 36

40. A train left Nairobi for Kisumu at 1515hrs and arrived at 0730hrs. How long did the journey take?

A. 16 hr 15 min   B. 8hr 45min
C. 6hr 15 min   D. 7hr 45 min

41. What is the area of the figure below in cm2?

(2x+4)cm

(2x-2)cm

(3x-4)cm

A. 34cm²   B. 280cm²
C. 40cm²   D. 68cm²

42. Find the value of:-

$$\frac{5xy^2 - 10}{x - cy}$$

If c = 0, x = 3 and y = 2

A. 0   B. 2   C. 10   D. 50

43. Arrange the following fractions in ascending order.

$\frac{2}{5}, \frac{4}{15}, \frac{1}{6}, \frac{1}{2}, \frac{2}{3}$

A. $\frac{1}{6}, \frac{4}{15}, \frac{2}{5}, \frac{1}{2}, \frac{2}{3}$ B. $\frac{1}{2}, \frac{2}{3}, \frac{2}{5}, \frac{1}{6}, \frac{4}{15}$
C. $\frac{2}{3}, \frac{1}{2}, \frac{2}{5}, \frac{4}{15}, \frac{1}{6}$ D. $\frac{4}{15}, \frac{2}{5}, \frac{2}{3}, \frac{1}{6}, \frac{1}{2}$
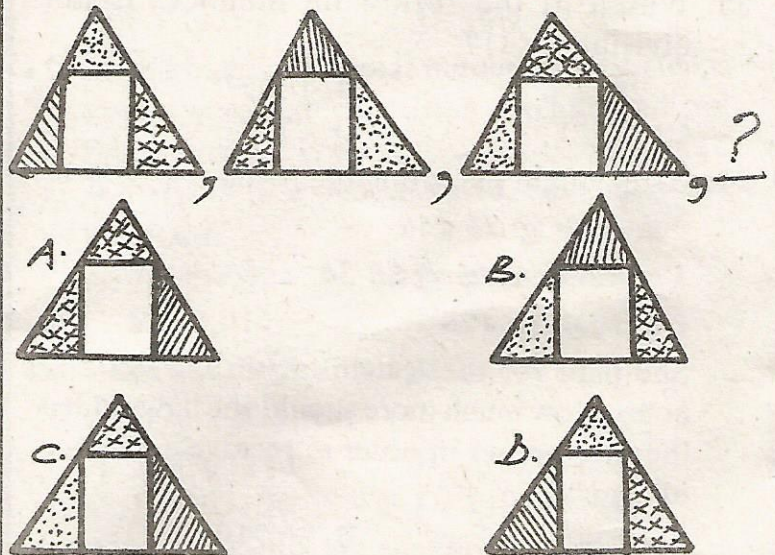
44. A family uses 5 deciliras of milk each day. How many litres of milk altogether would the family use in the months of June and July?

A. 305   B. 30.0   C. 3.05   D. 30.5

45. The charges for sending a telegram are Sh 10 for up to 10 words. Every word after ten words costs Sh 1. A tax of 18% of the total is also charged. The total payment is rounded off to the nearest five cents. How much will Agesa pay for sending the following telegram to his brother?

IAN AGESA BOX 5728 NAIROBI COME FOR FEES IMMEDIATELY BRING FEE STRUCTURE

A. Sh 14.20   B. Sh 14.15
C. Sh 12.00   D. Sh 14.16

46. A rectangular container measures 50cm by 80cm by 60cm. How many decilitres of water does it hold when it is $\frac{1}{5}$ full?

A. 96   B. 48   C. 480   D. 960

47. A square piece of land has an area of 1225m². If the land is to be fenced with 3 strands of wire, what is the length of the wire?

A. 3675m   B. 10.5m
C. 140m   D. 420m

48. In a church mass there were 180 men present. There were 100 more women than men and twice as many children as adult. What was the total attendance?

A. 920   B. 840   C. 460   D. 1380

49. Which is the next pattern?

50. The table below show distance by road in kilometres between different towns.

Nairobi				
120	Thika			
180	124	Kinoo		
420	380	360	Limuru	
600	260	540	180	Njabini
720	135	630	300	120

Mwangi left Kinoo to travel to Nairobi. He then travelled to Njabini and eventually returned back home to Kinoo. How long was his whole journey?

A. 1530km   B. 1430km
C. 1260km   D. 1350km