OPENER STD 8 TERM 2 2020
MATHEMATICS

NAME...

Learner's Number ☐☐☐

Gender   Boy ☐   Girl ☐

County name   .... County code ☐☐☐

Sub county name .... Sub county code ☐☐☐

School name   ....School code ☐☐☐

The grid below is to be filled by the teacher after marking the learner's work

	Level 1	Level 2	Level 3	Level 4
Numbers 1-15.				
Measurement 16-23				
Geometry 24-25				

1. Which of the following is 6 500 204 in words?
   A. Sixty five thousand, two hundred and four
   B. Six million , fifty thousand , two hundred and four
   C. Six million, five hundred thousand, two hundred and four
   D. Six million, five hundred and twenty four

2. What is the value of :
   (17 648 - 1 600+ 1 018 -1 439) ÷3
   A. 2 059   B. 9 052
   C. 5 029   D 5 209

3. What is the square root of the number obtained when 289 is multiplied by 4?
   A. 68   B. 34
   C. 17   D. 18

4. What is the number 59 863 rounded off to the nearest thousand?
   A. 60 000   B. 59 900
   C. 59 000   D. 100 00

5. Muli spent $^5/_{12}$ of his salary on rent and $^1/_3$ on food. He was left with sh 3 600. What was his salary?
   A. Sh 18 600
   B. Sh 15 800
   C. Sh 21 400
   D. Sh 14 400

6. What is the total value of digit 8 in the number 7 684 321?
   A. Eight hundred
   B. Eight thousand
   C. Eighty thousand
   D. Eight hundred thousand

7. By how much is the LCM of 30, 40 and 60 more than their HCF?
   A. 120   B. 110
   C. 12   D. 90

8. In the figure below line PQ is parallel to RS. Lines AB and CD are transversal lines. Angle BNQ = 50⁰ and angle PTC =30⁰
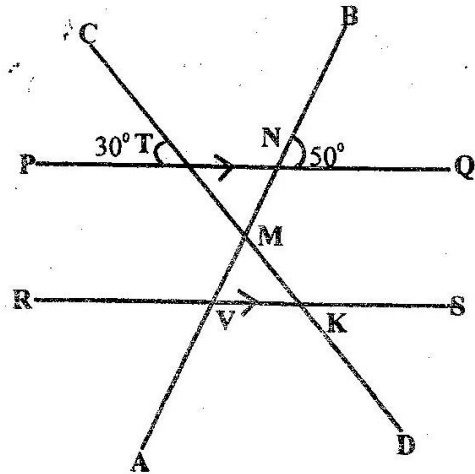

   What is the size of angle AMK?
   A. 80⁰   B. 150⁰
   C. 130⁰   D. 100⁰

9. The table below shows the number of pupils absent from a class of 45 in a certain week.

	Mon	Tue	Wed	Thur	Fri
Boys	3	6	1	1	5
Girls	2	4	1	4	3

   What is the attendance for that week?
   A. 38   B. 41
   C. 39   D. 42

10. What is the value of 1.05^2?
    A. 1.0125
    B. 1.1205
    C. 1.1025
    D. 1.0250

11. The diagram below shows an incomplete parallelogram **PQRS**. Complete the parallelogram and draw diagonals **PR** and **QS**
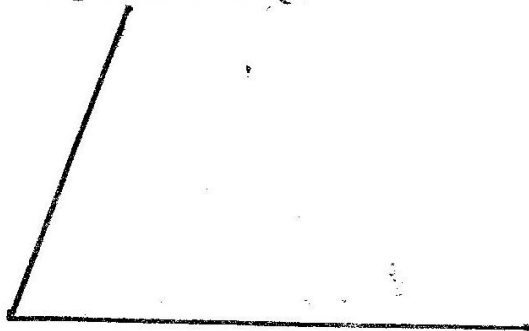
What is the length of the diagonal QS?
A. 8cm   B. 10.8cm
C. 15.6cm   D. 12.2cm

12. What is the value of $\dfrac{a(b-c)^2}{b+c^2}$

where a=3, b= 3a and c=b-5 ?
A. 4   B. 6
C. 9   D. 3

13. The area of a right angled triangular plot is $84m^2$. One of the shorter side is 7m. What is the length of the longest side?
A. 25 cm   B. 19cm
C. 17cm   D. 26cm

14. What is the place value of digit **7** in the difference of **462 342** and **134 693**?
A. Hundreds of thousand
B. Tens of thousand
C. Thousand
D. Hundred

15. What is 32. 15092 correct to three decimal places?
A. 32. 1509   B. 32.150
C. 32.000   D. 32.151

16. On a map whose scale is **1: 20 000**, a piece of land is represented by a rectangle measuring 4 cm by 3cm. What is the actual size of this land in hectares?
A. 48
B. 480
C. 4 800
D. 48 000

17. Which one of the following statements is correct?
A. $\frac{5}{18}$ is equal to 0.27
B. $\frac{5}{18}$ is greater than 0.27
C. $\frac{5}{18}$ is less than 0.27
D. 0.27 is greater than $\frac{5}{18}$

18. What is $\frac{3}{4}, \frac{8}{13}, \frac{7}{17}$ and $\frac{13}{18}$ arranged in a descending order?
A. $\frac{13}{18}, \frac{3}{4}, \frac{8}{13}, \frac{7}{17}$
B. $\frac{3}{4}, \frac{13}{18}, \frac{8}{13}, \frac{7}{17}$
C. $\frac{7}{17}, \frac{8}{13}, \frac{13}{18}, \frac{3}{4}$
D. $\frac{8}{13}, \frac{3}{4}, \frac{7}{17}, \frac{13}{18}$

19. The following are properties of a quadrilateral;
(i) *Has two pair of parallel lines*
(ii) *Diagonals bisect each other but not at right angle*
(iii) *Opposite sides are equal*
Which of the following quadrilateral is described above?
A. Rhombus
B. Trapezium
C. Rectangle
D. Parallelogram

20. The area of trapezium **ABCD** drawn below in 592 cm². Line **AB** is parallel to **DC**. Line **AQ** is the perpendicular bisector
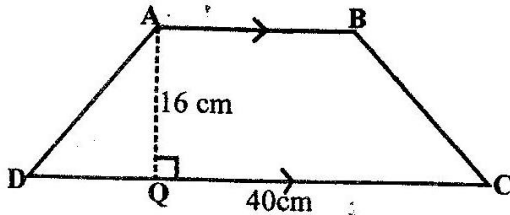
What is the length of line **AB**?

A. 34cm   B. 38cm

C. 48cm   D. 24cm

21. What is the value of

$$\frac{7.8 \times 0.28 \times 0.32}{5.2 \times 2.1}?$$

A. 6.4   B. 0.64

C. 0.064   D. 0.0064

22. In June, a dairy farm produced 1 560 litres of milk. The following month the production of milk increased by 15%. How much litres did the cow produce in the month of July?

A. 1 794*l*   B. 1 800*l*

C. 1 650*l*   D. 1 864*l*

23. A man is three times as old as his son. The sum of their ages in five years time will be 50 years. How old is the son now?

A. 15 years

B. 20 years

C. 12 years

D. 10 years

24. Simplify: $\frac{6}{11}(33x + 22y) + \frac{3}{5}(10x - 15y)$

A. 24x+ 15y

B. 24x + 3y

C. 24x -15y

D. 24x -3y

25. Gacheri bought the following items from a kiosk;

2kg tin cooking fat @ sh 120 per tin

2 kg packet of maize flour for sh 130.00

1½ kg of sugar @ sh 100

2 packets of biscuit for sh 30.00

If she had a five hundred shilling note to pay for the items how much balance did she receive?

A. Sh 30.00   B. Sh 130.00

C. Sh 70.00   D. Sh 170.00

26. Eight trucks are used to transport bags of maize to a milling company. Each truck makes an average of 12 trips per day. The capacity of each truck can pack 180 bags of maize. If each bag weighs 80 kg, how many tonnes of maize are transported altogether by trucks per day?

A. 138.24*t*

B. 1 382.4*t*

C. 13 824*t*

D. 138 240*t*

27. Favel deposited Sh 64 000 in a certain financial institution that paid simple interest at the rate of 12% per annum. How much money was in his account at the end of 18 months?

A. Sh 75 520

B. Sh 11 520

C. Sh 70 400

D. Sh 6 400

28. The area of a square plot of land is 2 916m². If the plot is fenced with three strands of wire, what length of wire is required?
    A. 216m
    B. 108m
    C. 54m
    D. 648m

29. Construct triangle **XYZ** such that line **XY= 7cm**, angle **ZXY =50°** and **YZX= 70°**. Draw a circle that touches points **X, Y** and **Z**. What is the length of its radius?
    A. 3.8cm
    B. 2.7cm
    c. 4.6cm
    D. 1.4cm

30. A closed cylindrical tank has a radius of 1.05m and a height of 2m. What is the surface area of the tank?
    (Take $\pi = {}^{22}/_7$)
    A. 6.93m²
    B. 13.2m²
    C. 20.13m²
    D. 26.4m²

31. A small aircraft took 7 hours 30 minutes to travel from Frankfurt in Germany to Nairobi in Kenya. It reached Nairobi at 0400hrs on Friday. At what time and day did it depart from Frankfurt?
    A. 2130hrs on Thursday
    B. 2030 hrs on Thursday
    C. 0930hrs on Thursday
    D. 0830hrs on Thursday

32. A motorist left home at 2.00pm and travelled to Kericho, a distance of 204km. He travelled at an average speed of 72km/hr. At what time did he reach Kericho?
    A. 2.50pm
    B. 5.40pm
    C. 3.10pm
    D. 4.50pm

33. The price of a radio was reduced by sh 640. This represented 40% discount. What was the price of the radio after the discount?
    A. Sh 1 600.00
    B. Sh 1 200.00
    C. Sh 960.00
    D. Sh 840.00

34. One hundred and eighty litres of juice is packed in two decilitre packets. How many packets are needed?
    A. 90
    B. 900
    C. 9 000
    D. 90 000

35. A rectangular container measures 65cm by 50 cm by 1.5m. What is the volume of the container in cubic centimetres?
    A. 487.5cm³
    B. 4 875 cm³
    C. 48750cm³
    D. 487 500cm³

36. The bus fare from one town to another was decreased by 20% and later increased by 20%. If the original fare was sh. 300, what is the new fare?
    A. Sh. 300
    B. Sh 312
    C. Sh 288
    D. Sh 360

37. Kerubo bought a TV set on hire purchase terms by paying a deposit of sh 10 500 plus 15 equal monthly instalments of sh 1 500 each. How much was the cost of TV set?
    A. Sh 33 000
    B. Sh 12 500
    C. Sh 22 500
    D. Sh 43 000

38. Mwaniki sold an item for sh 14 220 and made a loss of 10%. What was the buying price of the item?

A. Sh 12 798

B. Sh 13 468

C. Sh 1 580

D. Sh 15 800

39. What is the next number in the pattern below?

20, 24, 33, 58, _____

A. 107   B. 170

C. 179   D. 125

40. The table below shows the postal charges in shillings on small packets in a certain year.

| Mass of the packets	East Africa	Rest of Africa	Rest of the world
Not over 2 kg	45.00	54.00	65.00
Not over 100g	74.00	86.00	99.00
Not over 250g	125.00	141.00	186.00
Not over 500g	210.00	285.00	345.00
Not over 1kg	426.00	536.00	589.00
Not over 2kg	581.00	650.00	724.00

Kinuthia from Kiambu sent the following;

A 800g packet to Tanzania

A 1.5kg packet to Nigeria

A 80g packet to Germany

How much money did he pay altogether for the postage?

A. Sh 1 035

B. Sh 845.00

C. Sh 216.00

D. Sh 1 175.00

41. The diagram below shows an incomplete stack of cubes.
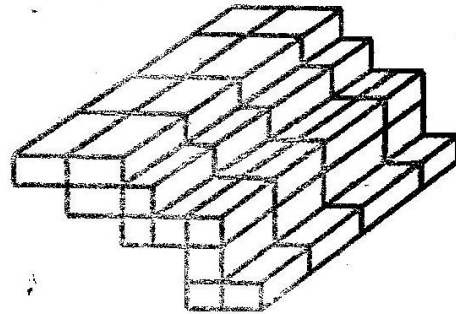
How many more cubes are required to make it complete?

A. 40   B. 120

C. 80   D. 160

42. Otieno and Ouma shared the profit from the sales of fish in the ratio of 2:3. If the profit was sh 12 000, how much money did Ouma get?

A. Sh 7 200

B. Sh 8 000

C. Sh 4 800

D. Sh 9 00

43. Twelve workers can dig a field in 8 days. How many workers are required so as to work in 6 days?

A. 9   B. 12

C. 8   D. 16

44. What is the product of the faces and vertices of an open cuboid?

A. 40   B. 48

C. 60   D. 72

45. Simplify the inequality below

22-2y >3y-8

A. y<6   B. y >5

C. y>6   D. y <5

46. The diagram below shows a parallelogram.
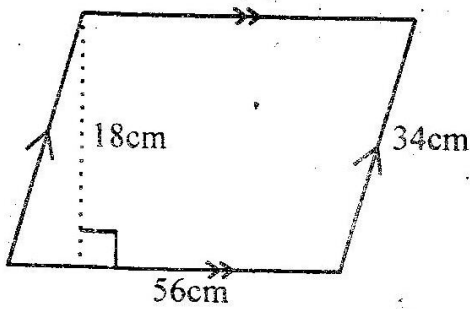
Calculate its area.
A. 1 904cm²
B. 1 008cm²
C. 1 080cm²
D. 1 940cm²

47. A beaker contained 0.5litres of water. 0.2 litres of water spilt off the beaker. What percentage of water remained in the beaker?
A. 40%   B. 30%
C. 60%   D. 50%

48. A salesperson earns a commission of 5% of the sales that he makes. In one month, he sold goods worth Sh 80 000. How much money did the owner receive?
A. Sh 76 000
B. Sh 70 000
C. Sh 4 000
D. Sh 5 000

49. How many days were there between 15th January and 1st April of the year 2016?
A. 79   B. 78
C. 77   D. 76

50. The graph below shows the price of beans in kilograms.

Mass in kilograms
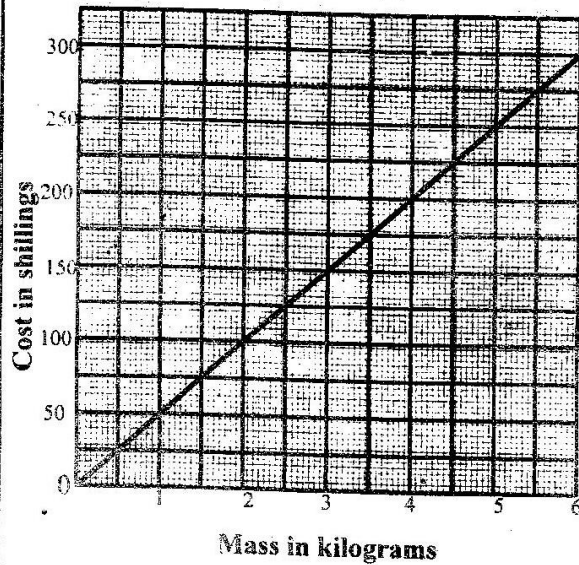
How many kilograms will cost sh. 275?
A. 4½kg   B. 5½kg
C. 6½kg   D. 7½kg