DISTINCTION SCHOOL BASED ASSESSMENT TEST
STANDARD EIGHT - 2020
MATHEMATICS

8 PREMIER

QUALITY IS OUR CONCERN 001

Time: 2Hrs

1. Which one of the following is **eleven million four hundred thousand six hundred and eleven** in symbols?
   A. 11400161
   B. 11040611
   C. 11400611
   D. 11004611

2. What is the place value of digit **5** in the number **645732**?
   A. 5000
   B. Hundreds
   C. Ten thousands
   D. Thousands

3. What is the Highest Common Factor of **48, 72** and **54**?
   A. 6
   B. 12
   C. 432
   D. 864

4. What is **5798923** rounded off to the nearest thousands?
   A. 5790000
   B. 5799000
   C. 5798000
   D. 579800

5. What is the next number in the sequence below?

   $1\frac{1}{2}, 2\frac{1}{6}, 2\frac{5}{6}, 3\frac{1}{2}$ _____

   A. $4\frac{1}{6}$
   B. $4\frac{1}{3}$
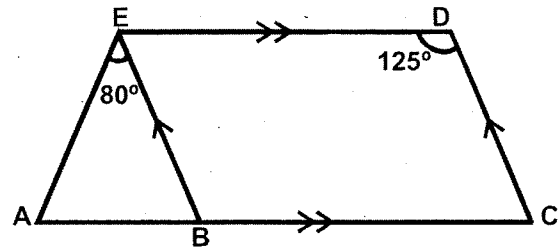   C. $4\frac{1}{2}$
   D. $5\frac{1}{6}$

6. What is the square root of $5\frac{4}{9}$?

   A. $1\frac{7}{9}$
   B. $2\frac{1}{3}$
   C. $2\frac{2}{3}$
   D. $\frac{7}{9}$

7. Which one of the following computations gives a fraction equivalent to $\frac{7}{9}$?
   A. $\frac{5 \times 2}{6 \times 3}$
   B. $\frac{7 \times 3}{3 \times 9}$
   C. $\frac{9 - 2}{11 + 2}$
   D. $\frac{7 \times 2}{18 \div 2}$

8. In the figure below, **BCDE** is a quadrilateral. Line **ABC** is a straight line. Line **AC** is parallel to **ED** and line **EB** is parallel to **DC**. Angle **AEB** = 80° and **EDC** = 125°.

   Find the value of angle **EAB**.
   A. 55°
   B. 135°
   C. 45°
   D. 80°

9. What is the least number that should be added to **3661** to make it divisible by **8**?
   A. 7
   B. 5
   C. 2
   D. 3

10. What is the value of: $\frac{4.5 + 3.6 \times 1.2}{0.5} + 1.36$
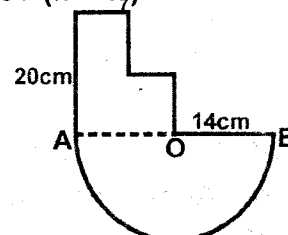   A. 20.36
   B. 19.32
   C. 19.00
   D. 10.18

11. The price of a suit was increase by **Shs. 400**. If this was **20%**, what was the price of the suit before the increase?
   A. Shs. 2400
   B. Shs. 2000
   C. Shs. 1800
   D. Shs. 1600

12. **1.5** tonnes of sugar were packed in **750g** packets. How many packets were obtained?
   A. 2
   B. 200
   C. 2000
   D. 20

13. What is the perimeter of the figure below given that **OB** is the diameter of the semi circle? $(\pi = {}^{22}/_7)$

   A. 120cm
   B. 140cm
   C. 126cm
   D. 112cm

14. The difference of two numbers is **850**. The smallest number is **717**. What is the other number?

A. 1467   B. 1667
C. 1567   D. 133

15. Kamau is three times as old as his sister. Ten years ago, their total age was **24** years. How old will Kamau be in **3** years times?
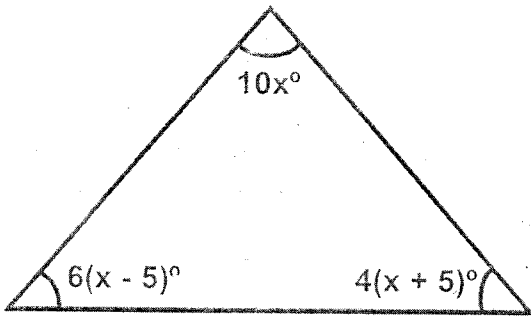
A. 36 years   B. 11 years
C. 14 years   D. 33 years

16. What is the value of: $\dfrac{ab^2(c^2 - 2a)}{c}$

where $a = b + 3$, $b = c - 2$ and $c = 4$.

A. 55   B. 30
C. 15   D. 70

17. The figure below shows a triangle.

What kind of a triangle is it?
A. Right angled triangle.
B. Equilateral triangle.
C. Scalene triangle
D. Isosceles triangle.

18. Alice bought **15** cartons of milk. A carton contains thirty six-**500ml** packets of milk. How many litres of milk did Alice buy altogether?

A. 27000 L   B. 54000L
C. 270L   D. 450L

19. What is the value of **w** in the equation.
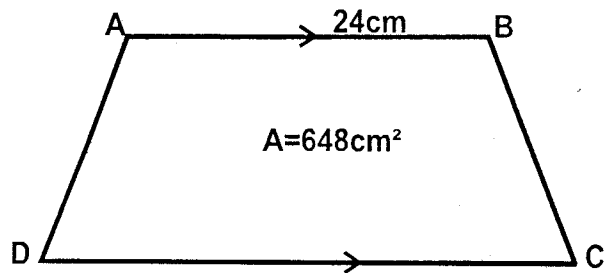
$\dfrac{w + 1}{2} + 3 = 6$?

A. 2   B. 5
C. 4   D. 8

20. Construct triangle **ABC** in which **AB = 6.5cm**, **AC = 5cm** and angle **ACB = 60°**. What is the length of line **CB**?

A. 5.2cm   B. 4.9cm
C. 5.9cm   D. 6.9cm

21. The area of the trapezium below is **648cm²**. Line **AB** is **24cm** and the perpendicular height is **18cm**.

Find the length of line **DC**.
A. 72cm   B. 96cm
C. 24cm   D. 48cm

22. Adagi bought a watch for **Shs. 342** after he was allowed a discount. If the marked price was **Shs. 360**, what was the percentage discount?

A. 5%   B. 18%
C. 22%   D. $6\frac{1}{9}\%$

23. The temperature of ice was $14°$ below the melting point. It was heated to a temperature of **68°C**. What was the rise in temperature?
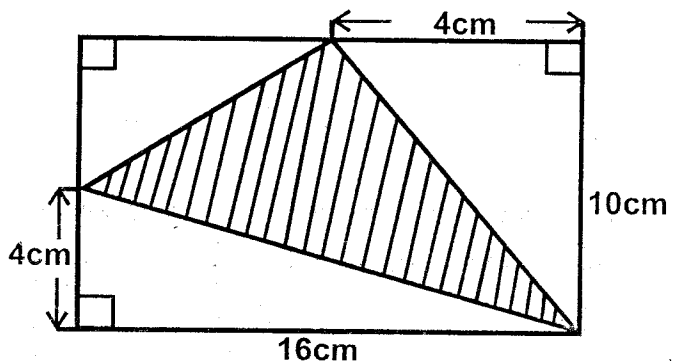
A. 54°C   B. 72°C
C. 68°C   D. 82°C

24. The length of a rectangle is **36cm**. Its diagonal is **45cm**. Calculate its perimeter?

A. 126cm   B. 162cm
C. 81cm   D. 61cm

25. Three traffic signals are set to flash at intervals of **24** min, **30** min and **36** min. It they flashed together at **9:10a.m**, at what time had they flashed together before?

A. 3:10pm   B. 9:16am
C. 10:40pm   D. 3:10am

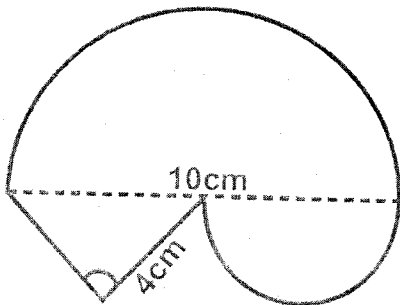26. What is the area of the shaded part in the figure below?

A. 20cm²   B. 72cm²
C. 30cm²   D. 36cm²

27. Kemunto bought the following items from a shop:

    2kg of rice at Shs. 75.
    3 packets of flour at Shs. 120.
    2½kg of sugar at Shs. 50.
    2 packets of coffee for Shs. 150.

    She paid for the items with two-sh.500 notes. What balance did she get?
    A. Shs. 785   B. Shs. 65
    C. Shs. 215   D. Shs. 225

28. The ratio of men to women in a meeting was **4:5**. There are **70** more women than men in the meeting. How many women were there?
    A. 350   B. 630
    C. 280   D. 400

29. What is the perimeter of the figure below. The diameter of the semi-circle is **10cm** (Take π = **3.14**)
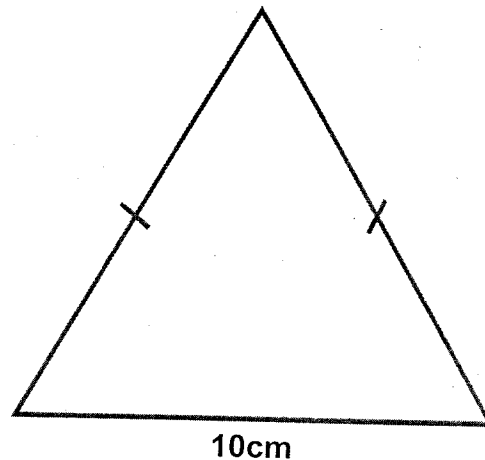

    A. 32.55cm   B. 30.55cm
    C. 23.44cm   D. 29.55cm

30. A book seller sold Distinction Mathematics text book for **Shs. 720** making a **10%** loss. How much would he have sold the book to make 20% profit?
    A. Shs. 880   B. Shs. 800
    C. Shs. 960   D. Shs. 864

31. A circular pond has an area of **2464m²**. It was fenced round using five strands of wire. What is the length of the wire used? $\pi = {}^{22}/_7$
    A. 789m   B. 280m
    C. 176m   D. 880m

32. A motorist travelled at a speed of **60km/h** for **2hrs**. He then increased the speed by **10km/h** for other **2** hours. What was the average speed for the whole journey?
    A. 65km/h   B. 64km/h
    C. 70km/h   D. 68km/h

33. What is the sum of the **mean** and the **mode** of the following numbers?
    4, 5, 6, 7, 5, 9, 5, 8, 5
    A. 6   B. 5
    C. 10   D. 11

34. Simplify:
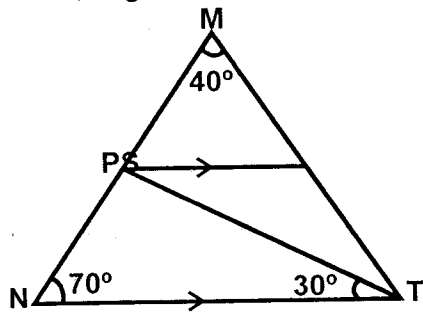 $$\frac{1}{2}(2x - 14y - 6) + \frac{1}{4}(8x + 36y + 12)$$
    A. 3x + 2y - 6   B. 3x + 2y + 6
    C. 3x + 2y   D. 3x + 16y + 6

35. 8 workers were expected to take **24** days to complete some work. Two failed to turn up. How many more days did the work take the remaining workers to complete the work?
    A. 32   B. 8
    C. 18   D. 6

36. The perimeter of the triangle below is **36cm**.

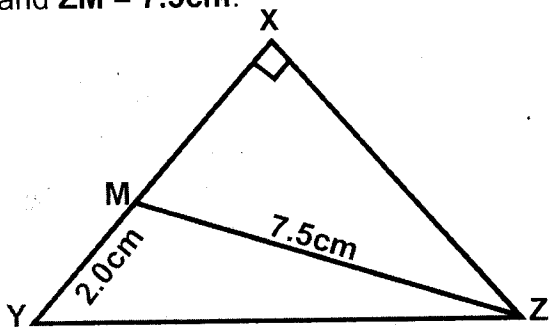

    What is the area of the triangle above?
    A. 60cm²   B. 120cm²
    C. 30cm²   D. 65cm²

37. Luka borrowed **Shs. 25500** from a bank that charged simple interest at a rate of **15½%** p.a. If he paid all the money after **8** months, how much did he pay?
    A. Shs. 25050   B. Shs. 2550
    C. Shs. 28135   D. Shs. 2635

38. A length of **5cm** was drawn on a map to represent a river of **80km** long. What is the scale of the map?
    A. 1:16000000   B. 1:1600000
    C. 1:160000   D. 1:16000

39. After paying a commission of **7%** of the price of a vehicle to an agent, the owner of the vehicle was left with **Shs. 232500**. How much was paid to the agent?
    A. Shs. 17500   B. Shs. 17275
    C. Shs. 16275   D. Shs. 25000

40. In the figure below, line **MN = MT**, angle **NMT = 40°**, angel **PTN = 30°** and angle **PNT = 70°**.

What is the measure of angle **MPT**?
A. 30°   B. 100°
C. 80°   D. 70°

41. The area of a square piece of land is **0.64ha**. What is its perimeter in metres?
A. 80m   B. 320m
C. 6400m   D. 8000m

42. Naliaka bought **1000** bananas at **Shs. 5** each. On the way, **43** bananas got spoilt. She sold the rest in piles of **11** bananas at **Shs. 88** each pile. What was the profit made?
A. Shs. 6656   B. Shs. 1656
C. Shs. 5000   D. Shs. 2656

43. Timothy bought a T.V set through a hire purchase terms by paying a deposit of **Shs. 9500** followed by **20** monthly installments of **Shs. 920** each. If the cash price was **Shs. 24000**, how much more than the cash price did he pay for the T.V set?
A. Shs. 3900   B. Shs. 13580
C. Shs. 15100   D. Shs. 5600

44. The figure below shows a right-angled triangle **YXZ**. Line **XY = 6.5cm, MY = 2.0cm** and **ZM = 7.5cm**.
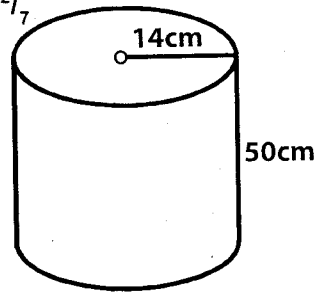

What is the area of triangle **MZY**?
A. 6.5cm²   B. 13.5cm²
C. 6.0cm²   D. 18.5cm²

45. What is **twice** the value of:
$\frac{1}{2}$ of $\frac{3}{4} + \frac{1}{8}(\frac{7}{9} - \frac{2}{3}) \div \frac{1}{4}$?

A. $\frac{31}{36}$ B. $\frac{31}{72}$

C. $\frac{1}{4}$ D. $\frac{17}{18}$

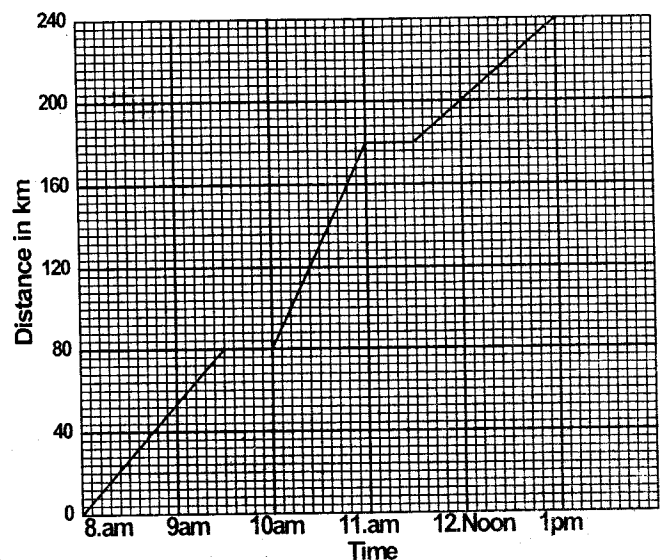46. What is the surface area of the solid drawn below? $\pi = ^{22}/_7$

A. 50016cm²   B. 30800cm²
C. 2992cm²   D. 5632cm²

47. What is the total value of digit **3** in the number? **6835290**
A. 3000   B. Ten thousands
C. Thirty thousand D. 300000

48. The table below shows distance in **km** between different towns.

Thika			
80	Kenol		
113	140	Sagana	
160	120	40	Karatina

What is the distance from Sagana to Thika via Kenol?
A. 40km   B. 160km
C. 113km   D. 220km

49. Mr. Stephen paid **Shs. 1800** for an item after he was allowed a discount of **10%**. How much was the marked price?
A. Shs. 2000   B. Shs. 1980
C. Shs. 1620   D. Shs. 2180

50. The graph below shows the journey of a motorist.

What was his average speed for the whole journey?
A. 60km/h   B. 48km/h
C. 72km/h   D. 100km/h