

# IDM EVALUATION TEST

CODE:0012020

MATHEMATICS STD 8 -2020

TIME: 2 HOURS

1. Which one of the following numbers is ten million six hundred thousand five hundred and twenty in figures?

A. 1 605 200  
 B. 106 005 020  
 C. 10600 520  
 D. 10 060 520

2. What is 2.09545 rounded off to three decimal places.

A. 2.095  
 B. 2.100  
 C. 2.955  
 D. 2.096

3. What is the value of

$$\frac{3(5^2 + 4^2) - 6 \times 8 \div 2}{11 \times 3}$$

A.  $49\frac{1}{2}$   
 B. 3  
 C. 33  
 D.  $5\frac{1}{33}$

4. How many days are there between 31<sup>st</sup> January to 1<sup>st</sup> March in the year 2000?

A. 31                      B. 30  
 C. 29                      D. 28

5. What is the value of;-

$$\frac{0.36 \times 4.5 \times 5.7}{0.72 \times 0.5 \times 1.9}$$

A. 135                      B. 0.135  
 C. 1.35                      D. 13.5

6. Omolo bought the following items from Uchumi supermarket 3 packets of maize meal @ sh. 105.

1 ½ kg of rice @ sh. 90  
 2 loaves of bread @ sh. 45  
 2 kg of beans for sh. 160

2 ½ kg potatoes @ sh. 40

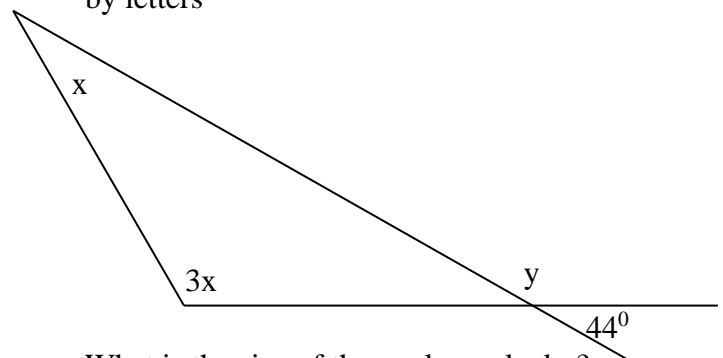
If he gave the shopkeeper a sh. 1000 note, how much balances did he receive?

A. Sh. 200                  B. sh. 40  
 C. sh. 360                  D. sh. 240

7. What is the next number in the pattern 8, 9, 13, 22, \_\_\_\_.

A. 28                          B. 38  
 C. 42                          D. 36

8. In the figure below, the angles are marked by letters



What is the size of the angle marked x?

A.  $42^{\circ}$     B.  $34^{\circ}$     C.  $36^{\circ}$     D.  $52^{\circ}$

9. The diagonals of a rhombus are 10 cm and 24 cm long respectively. Calculate the perimeter of the rhombus?

A. 92 cm                      B. 72 cm  
 C. 68 cm                      D. 52 cm

10. In the number 57402, what is the product of total value of digit 7 and 4?

A. 7000                      B. 2 800 000  
 C. 7 400                      D. 28000

11. A room measures 10 m by 8 m by 4 m high. The doors and windows take  $24 \text{ m}^2$ . If paint is sold in 3 litre tins at sh. 950 per tin. What is the cost of paint used for painting the walls if 1 litre was used for every  $8 \text{ m}^2$ ?

- A. Sh. 28500      B. sh. 4750  
C. sh. 14250      D. sh. 5750

12. A tap takes 3.5 hours to fill  $\frac{7}{8}$  of a tank with water. When will the empty tank be filled if the tap is turned on at 10.15 a.m?  
A. 2.30 p.m.      B. 2.15 p.m.  
C. 3.15 p.m.      D. 10.45 p.m.

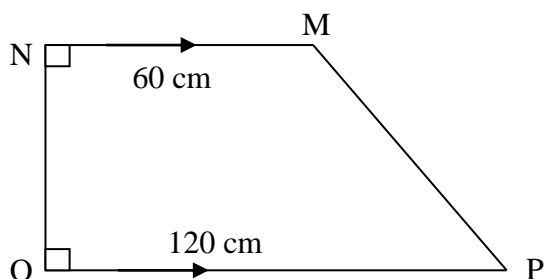
13. A clock gains 5 seconds every hour. If it was set correctly at 10.30 a.m on Tuesday, at what time would it read the following Tuesday at 10.30 a.m.?  
A. 10.25 a.m.      B. 10.30 p.m.  
C. 10.44 a.m.      D. 10.16 a.m.

14. Find the value of ;  
$$\frac{3}{4} - \left(\frac{2}{5} \text{ of } \frac{1}{6}\right) + \frac{1}{8}$$
  
A.  $\frac{97}{120}$       B.  $\frac{11}{60}$       C.  $\frac{29}{30}$       D.  $\frac{7}{8}$

15. What is the value of x in the equation;  
$$\frac{x-3}{3} + x = 5 - 2x$$
  
A.  $1\frac{4}{5}$       B. 2      C.  $1\frac{1}{3}$       D.  $1\frac{1}{2}$

16. What is the volume of the cylinder whose diameter is 14cm and the height 25cm?  
A.  $1540 \text{ cm}^3$       B.  $53080 \text{ cm}^3$   
C.  $3850 \text{ cm}^3$       D.  $6160 \text{ cm}^3$

17. The figure below is a trapezium MNOP of area  $7200 \text{ cm}^2$ .



- Find the perimeter of the trapezium  
A. 270 cm      B. 9 cm  
C. 260 cm      D. 360 cm

18. If  $a = 3$ ,  $b = 2$ ,  $c = a - 2$ ,  $d = a + c$ . Find the value of

$$\frac{a^2b^2 - c^2d^2}{a^2c^2}$$

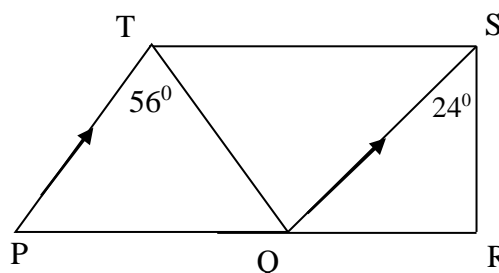
- A.  $\frac{2}{3}$       B.  $2\frac{2}{9}$       C. 20      D.  $\frac{4}{9}$

19. The cash price of a radio is sh. 20000. A trader offered 20% discount on it if bought on cash. However on hire purchase price, one can pay a deposit of sh. 9000 and sh. 1500 monthly installments for 6 months. How much more than cash price will a customer pay on hire purchase?  
A. Sh. 3000      B. sh. 6000  
C. sh. 4500      D. sh. 2000

20. An open pipe has a length of 28 cm and diameter of 14 cm. Find its total surface area.  
A.  $1232 \text{ cm}^2$       B.  $1386 \text{ cm}^2$   
C.  $616 \text{ cm}^2$       D.  $154 \text{ cm}^2$

21. On a map whose scale is 1:200000 a rectangular piece of land measures 5 cm by 4 cm. What is the area of this piece of land in hectares?  
A. 80000 ha      B. 8000 ha  
C. 800 ha      D. 80 ha

22. In the figure below PT is parallel to QS, SR is perpendicular to PR. Angle QSR =  $24^\circ$  and angle PTQ =  $56^\circ$ .

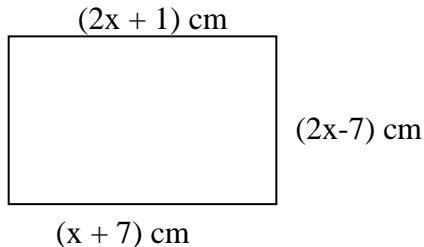


- What is the size of angle PQT.  
A.  $62^\circ$       B.  $56^\circ$       C.  $66^\circ$       D.  $58^\circ$

23. Construct triangle ABC in which line  $AB = 8 \text{ cm}$  angle  $ABC = 75^\circ$  and line  $BC = 4 \text{ cm}$ . Draw a circle that passes through the points A, B and C. What is the radius of the circle?

- A. 8.2 cm            B. 5.1 cm  
C. 2.9 cm            D. 4.1 cm

24. The figure below is a rectangle



What is the perimeter of the rectangle?

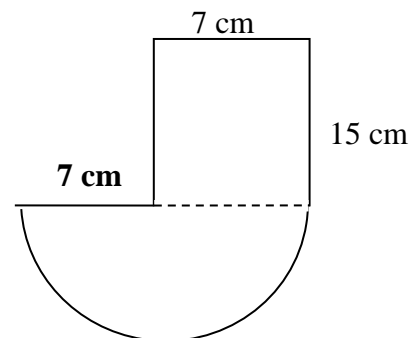
- A. 31 cm            B. 36 cm  
C. 18 cm            D. 65 cm
25. A train travelling at an average speed of 54 km/h takes 10 seconds to cross the bridge. What is the length of the bridge in metres?  
A. 54 m            B. 129.6 m  
C. 180 m            D. 150 m
26. Twenty men can do a piece of work in 14 days. If six workers fail to turn up for the job, How many more days will the remaining workers take to complete the same piece of work?  
A. 14            B. 20  
C. 6            D. 26
27. Omondi earns a basic salary of sh. 4500. He is also paid a commission of 25% on sales above sh. 10,000. In one month he earned a total of sh. 8500. Find the total sales.  
A. Sh. 16000            B. sh. 26000  
C. sh. 70000            D. sh. 126000
28. A bus left Kakamega at 7.30 p.m. on Tuesday and took 9 hours 40 min to reach Mtito Andei. On what day and time did it reach Mtito Andei?  
A. Wed 5.10 a.m.    B. Tue 5.10 a.m.  
C. Wed 5.10 p.m.    D. Tue 5.10 p.m.
29. Kamau paid sh. 5780 for a dress after getting a discount of 15% of the marked price. How much would she have paid if she was offered a 20% discount?  
A. Sh. 5440            B. sh. 8160  
C. sh. 6144            D. sh. 6936

30. The table below shows the number of crates of bread sold from a supermarket in six days of the week.

Day	M	T	W	TH	F	S
No. of crates	160	240	380	420	510	300

Find the mean sale for the week.

- A. 353            B. 335  
C. 2010            D. 325
31. How many groups of hundreds are in the total value of digit 6 in 764 895?  
A. 60            B. 6000  
C. 600            D. 60000
32. Simplify the expression.  
 $\frac{4}{5}(30m + 15y) + \frac{2}{3}(12m + 12y)$   
A.  $32y + 26m$             B.  $32m - 26y$   
C.  $20y + 32m$             D.  $32m + 26y$
33. Caleb bought 3.5 tonnes of sugar from West Kenya sugar factory and repacked into 2kg packets. How many packets did he obtain.  
A. 1750            B. 3500  
C. 1705            D. 7000
34. What is the perimeter of the figure below?  
(Take  $\pi$  as  $\frac{22}{7}$ )



- A. 616 cm            B. 102 cm  
C. 66 cm            D. 80 cm

35. In Malava constituency three candidates contested for the seat of M.P. The first candidate got 675 votes more than the second candidate who got 15900 votes.

The third candidate got  $\frac{2}{5}$  of what the two candidates got. If one hundred and eighty votes got spoilt, how many votes were cast altogether?

- A. 45465                      B. 32475  
C. 45645                      D. 53423

36. A path 2.5 m wide runs all the way round a plot of land measuring 40 m long by 24 m wide. What is the area of the path?

- A.  $1305 \text{ m}^2$                       B.  $345 \text{ m}^2$   
C.  $960 \text{ m}^2$                       D.  $1045 \text{ m}^2$

37. The age of 10 pupils in std 8 in Mahehe school is as follows:- 18, 13, 14, 19, 14, 16, 17, 14, 15 and 16 years. Calculate the sum of mean and mode

- A. 14.0                      B. 31.1  
C. 29.6                      D. 15.6

38. A 20.5 m long ladder leans on a 20m high wall. How far from the wall is the ladder placed?

- A. 9m                      B. 4.5 m  
C. 18m                      D. 5.5 m

39. There were t men in Jambo travellers bus. The number of children in the bus was three times that of men but fifteen more than that of women. The total number of men, women and children was 54. Which one of the following equations can be used to find the number of men?

- A.  $7t+15 = 54$   
B.  $3 \frac{1}{2} t - 30 = 54$   
C.  $2t - 15 = 54$   
D.  $7t - 15 = 54$

40. Increase  $\frac{1}{2}$  by 25%

- A.  $\frac{5}{4}$     B.  $\frac{1}{8}$     C. 0.625    D. 0.125

41. Evaluate  $(47 - 12 \times 3) + 84 \div 12$

- A. 17                      B.  $7 \frac{11}{12}$   
C. 18                      D. 109

42. Kisia had the following animals on his farm cows 10, goats 6, sheep 7, pigs 5 and

donkeys 2. If a pie chart was to be drawn. What angle would represent sheep?

- A.  $120^\circ$                       B.  $60^\circ$   
C.  $24^\circ$                       D.  $84^\circ$

43. Shiyonga went to bed at 10.20 p.m. after studying and woke up at 5.00 a.m. How long did he sleep?

- A. Sh. 20 min                      B. 6 h 40 min  
C. 17h 20 min                      D. 8 h 40 min

44. Lisamula made a 10% loss after selling a watch at shs. 1080. At what price must he sell it to make a 15% profit.

- A. 1242                      B. 1380  
C. 1134                      D. 1200

45. Lumwamu spent  $\frac{2}{5}$  of his salary on food,  $\frac{1}{4}$  on clothing,  $\frac{1}{6}$  on other expenses and saved the rest. What fraction of his salary did he save?

- A.  $\frac{11}{60}$     B.  $\frac{49}{60}$     C.  $\frac{11}{30}$     D.  $\frac{39}{60}$

46. What is the smallest 5 – digit number written in symbols that can be formed using. 3, 2, 7, 8 and 5?

- A. 32785                      B. 23578  
C. 32578                      D. 87523

47. A carton measuring 72 cm by 48 cm by 75 cm was packed with cylindrical tins of radius 6 cm and height 15 cm standing upright. How many tins were there in the carton?

- A. 480                      B. 360  
C. 240                      D. 120

48. Which of the following properties is not common with rhombus and square?

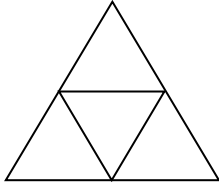
- A. Interior angles add up to  $360^\circ$   
B. Diagonals bisect each other at  $90^\circ$   
C. Each interior angle is  $90^\circ$   
D. All sides are equal

49. Simplify the inequality below.

$$2y - 2 < 7 - y$$

- A.  $Y > 3$                       B.  $y > 5$   
C.  $y < 3$                       D.  $y < 5$

50. How many triangles are there in the figure drawn below.



- A. 4      B. 6      C. 5      D. 8