



8

AIM PRESS EXAM SERIES

STANDARD EIGHT - YEAR 2021

MATHEMATICS

Time :2 Hours

1. What is 77701777 written in words?
 A. Seventy seven million one thousand, seven hundred and seventy seven
 B. Seventy seven million, seven hundred and one thousand, seven hundred and seventy seven
 C. Seven million, seven hundred and one thousand seven hundred and seventy seven
 D. Seven million, seventy thousand, seven hundred and seventy seven

2. What is 6.69964 correct to three decimal places?
 A. 6.699 B. 6.7 C. 6.700 D. 6.70

3. What is the place value of digit 2 in the product of the total value of digit 6 multiplied by the total value of digit 4 in the number 526438?
 A. Hundred thousands B. Ten millions
 C. Ten thousands D. Millions

4. Which is the correct order of writing the fractions $\frac{3}{4}$, $\frac{1}{2}$, $\frac{3}{5}$, $\frac{5}{12}$, $\frac{2}{3}$ starting from the largest to the smallest?

- A. $\frac{3}{4}$, $\frac{2}{3}$, $\frac{3}{5}$, $\frac{1}{2}$, $\frac{5}{12}$ B. $\frac{3}{4}$, $\frac{3}{5}$, $\frac{2}{3}$, $\frac{1}{2}$, $\frac{5}{12}$
 C. $\frac{1}{2}$, $\frac{2}{3}$, $\frac{3}{4}$, $\frac{3}{5}$, $\frac{5}{12}$ D. $\frac{5}{12}$, $\frac{1}{2}$, $\frac{3}{5}$, $\frac{2}{3}$, $\frac{3}{4}$

5. What is:

$$\frac{1}{3}(5x + 6y) + \frac{1}{2}(3x + 8y) - 2\frac{1}{2}x - \frac{1}{4}y$$

in simplified form?

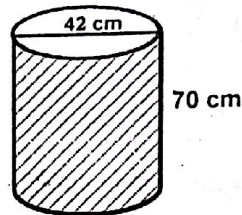
- A. $\frac{4}{6}x + 5\frac{1}{4}y$ B. $\frac{1}{6}x - 5\frac{3}{4}y$
 C. $5\frac{2}{3}x + 5\frac{3}{4}y$ D. $\frac{2}{3}x + 5\frac{3}{4}y$

6. What is the value of:

$$\frac{0.64 + 0.6 \div 0.4}{0.2}$$

- A. 1.07 B. 15.5
 C. 10.7 D. 1.55

7. The figure below shows a cylindrical solid. Find the area of the curved part in square centimetre.



- A. 388080 cm²
 B. 20328 cm²
 C. 9240 cm²
 D. 5544 cm²

8. The following are properties of a certain quadrilateral:

- i) *Diagonals are not equal.*
 ii) *Diagonals bisect at right angles.*
 iii) *All sides are equal.*
 iv) *Opposite angles are equal.*

Which quadrilateral has the above properties?

- A. Rhombus B. Parallelogram
 C. Square D. Rectangle

9. Grace reached her home at 3.15 a.m on Wednesday after taking 8 hours 45 minutes from Mombasa. On what day and what time had she started her journey in 24 hour clock system?

- A. Wednesday 0630 hrs B. Tuesday 1830 hrs
 C. Tuesday 0630 hrs D. Wednesday 1830 hrs

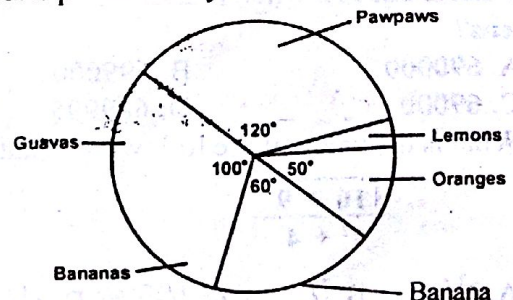
10. The following are lengths of sides of different triangles.

- i) 5, 12, 13 ii) 6, 8, 10
 iii) 5, 10, 13 iv) 7, 24, 25

Which one of the choices below contains all right angled triangles?

- A. (ii), (iii), (iv) B. (i), (iii), (iv)
 C. (i), (ii), (iii) D. (i), (ii), (iv)

11. The pie-chart below represents quantities of fruits produced by a farmer in one week.



If the total number of fruits were 900, how many more guavas than lemons were there?

- A. 175 B. 327 C. 252 D. 75

12. A Mathematics text book has 119 sheets of paper and a cover. Each sheet of paper has a mass of 3 grams and the cover has a mass of 30 grams. Find the mass of the book in kilograms.

- A. 0.387 kg B. 38.9 kg
C. 387 kg D. 3.89 kg

13. What is the value of:

$$\frac{x^2(4c - 2d)}{c}$$

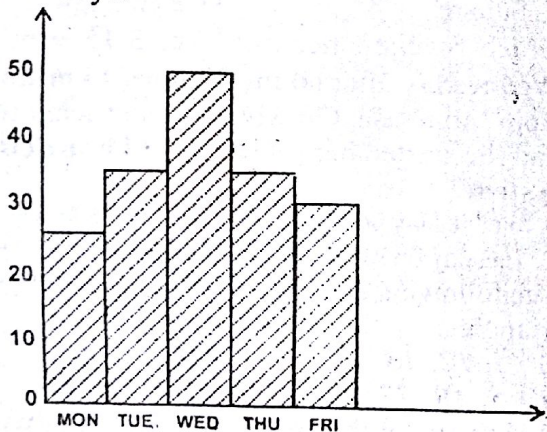
If $x = c^2$, $d = x - 1$, $c = 2$?

- A. 224 B. 16 C. 8 D. 32

14. A meeting was attended by 2100 men. The number of women was 800 more than that of men and the children were 650 less than that of men. Each person was given 2 pieces of bananas and each banana costed Sh. 5. How much money was spent to buy the bananas?

- A. 64500 B. 45150 C. 32250 D. 129000

15. The bar graph below shows the number of kilograms of sugar consumed by a school in five days.



In which two consecutive days was the total consumption highest?

- A. Thur and Fri B. Tue and Wed
C. Mon and Tue D. Wed and Fri

16. What is 689995 when rounded off to nearest tens?

- A. 690000 B. 699000
C. 69000 D. 689995

17. What is the value of the following equation?

$$\frac{\sqrt{16 + 9}}{4^2 + 4}$$

- A. $2\frac{1}{2}$ B. $\frac{7}{20}$ C. $\frac{1}{4}$ D. $1\frac{1}{6}$

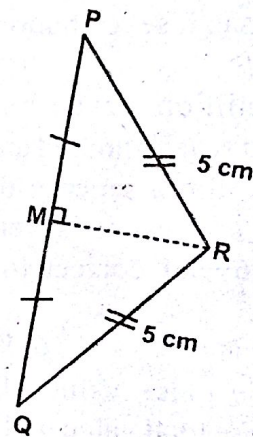
18. What is the value of $2.2 \div 2.1$ correct to 2 decimal places?

- A. 1.048 B. 1.48
C. 1.047 D. 1.05

19. A church measures 18 m long by 12 m wide and 4.5 m high. How many square tiles of sides 25 cm are needed to cover the floor completely?

- A. 1296 B. 86400
C. 3456 D. 750000

20. In triangle PQR below, $PQ = 8$ cm, $PM = MQ$ and $PR = RQ = 5$ cm.



What is the area of the triangle PQR?

- A. $12\frac{1}{2}$ cm² B. 12 cm²
C. $7\frac{1}{2}$ cm² D. 6 cm²

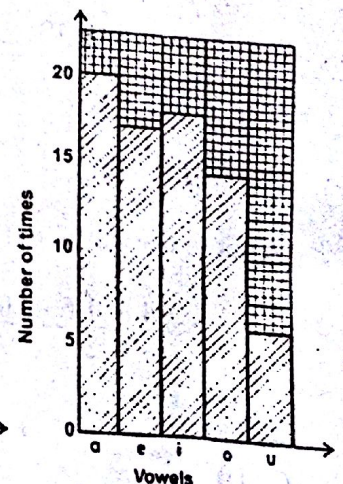
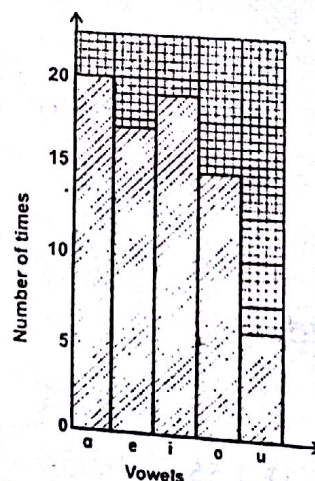
21. The number of times vowels a, e, i, o and u appeared in a certain passage was as shown in the table below.

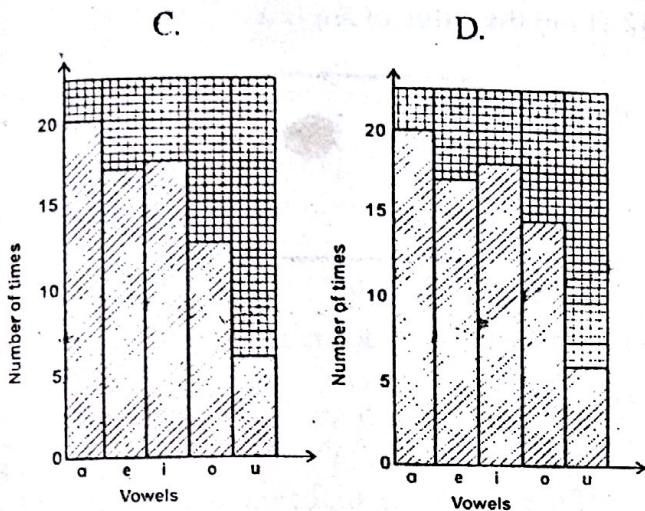
Vowel	a	e	i	o	u
Number of times	20	17	18	14	6

Which one of the following bar graphs **CORRECTLY** represents this information?

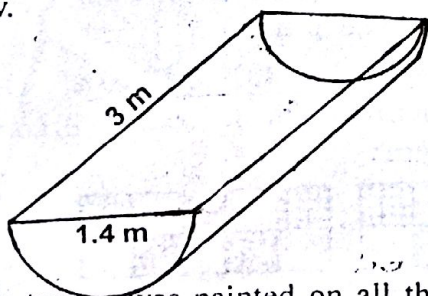
A.

B.



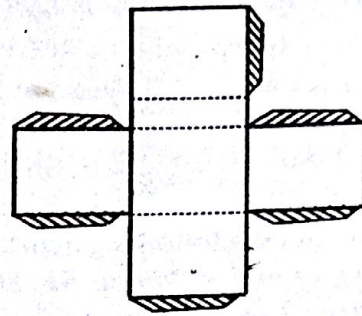


22. 18 workers were hired to weed a farm in 2 weeks. If at the beginning, some workers didn't turn up for the job and the remaining workers took a total of 21 days, how many workers failed to turn up?
A. 9 B. 6 C. 12 D. 27
23. A farm whose area is 49.7436 hectares is divided into six plots as follows: 0.3 ha for homestead, 6.4 ha for bananas, 8.234 ha for beans, 12.6 ha for maize, 7.536 ha for fruits and 9.5636 ha for grazing. The rest of the farm is occupied by access roads. How much land is under access roads?
A. 44.6336 ha B. 6.10 ha
C. 5.11 ha D. 5.0927 ha
24. James and Tom were given some money to share among themselves. They shared the money in the ratio of 5:7 respectively. If James got Sh. 25000, how much money did they share altogether?
A. Sh. 300000 B. Sh. 60 000
C. Sh. 50000 D. Sh. 35000
25. A farmer made a trough as shown in the figure below.



- If the trough was painted on all the outer surfaces, what was the total surface area painted? (Take $\pi = \frac{22}{7}$)
A. 8.14 m^2 B. 9.24 m^2
C. 9.68 m^2 D. 12.76 m^2

26. The net below was folded to form a solid shape.



What was the product of the faces and the edges formed by the solid?

- A. 60 B. 48 C. 96 D. 72
27. An empty lorry weighs 3.4 tonnes. It is loaded with 30 bags each weighing fifty kilograms. What is the total mass of the lorry and the load in kilograms?
A. 4900 B. 4090 C. 490 D. 4.9
28. A tank was a third full of water. After 2100 litres was added, it became $\frac{5}{8}$ full. Calculate the capacity of the tank when full.
A. 3000 L B. 7000 L C. 7200 L D. 700 L
29. The table below shows the number of pupils who were in standard 1 to 4 in a certain school from 2001 to 2004.

	Std. 1	Std. 2	Std. 3	Std. 4
2001	79	73	59	55
2002	83	77	71	57
2003	86	80	74	68
2004	89	83	77	71

How many pupils of the class which was in Std. 1 in 2001 had dropped out of that class by 2004?

- A. 24 B. 16 C. 10 D. 8
30. During drought, the government distributed 224 tonnes to 500 families. How many kilograms did each family get?
A. 44.8 kg B. 448 kg
C. 4480 kg D. 0.448 kg
31. What is the least number that can be added to 46153 to make it divisible by 11?
A. 1 B. 4 C. 8 D. 3
32. What is the area of a circle whose circumference is 37.68 cm? (Take $\pi = 3.14$)
A. 75.36 cm^2 B. 113.04 cm^2
C. 452.16 cm^2 D. 118.32 cm^2
33. The scale 1 : 6500 can be written as 1 cm represents _____ metres.
A. 650 B. 65
C. 6.5 D. 650000

34. Ann borrowed Sh. 30,000 from a bank that charged interest of 15% p.a. She repaid all the money borrowed plus interest after $1\frac{1}{2}$ years. How much more was the amount paid than the principal amount?

- A. Sh. 2250 B. Sh. 6750
C. sh. 35750 D. Sh. 33750

35. Sam bought the following items:

- 3 kg of maize flour @ Sh. 80.
Three 2 kg packets of sugar @ Sh. 210.
3 bars of soap @ Sh. 105.
4 litres of milk @ Sh. 45.
 $1\frac{1}{2}$ kg of meat @ Sh. 300.

He paid for the items using two one thousand shilling note. How much was his balance?

- A. Sh. 1815 B. Sh. 665 C. Sh. 185 D. Sh. 335

36. A salesman was given a commission of Sh. 2400 in a certain month on the sale of tickets worth Sh. 48,000. What was his percentage commission?

- A. 5% B. 15% C. 20% D. 50%

37. What is the next number in the sequence below; $3\frac{3}{4}, 5\frac{1}{4}, 6\frac{3}{4}, \underline{\hspace{1cm}}?$

- A. $8\frac{3}{4}$ B. $8\frac{1}{4}$ C. $9\frac{1}{4}$ D. $7\frac{1}{4}$

38. The temperature of water in a container was 23°C . The container was placed on fire until the water boiled. What was the rise in temperature?

- A. 100°C B. 123°C C. 27°C D. 77°C

39. The table below shows bus fare charges. (Fares in shillings)

A			
50	B		
60	30	C	
70	40	30	D
80	60	50	40
E			

How much fare is charged from A to E via D?

- A. Sh. 40 B. Sh. 110 C. Sh. 70 D. Sh. 120

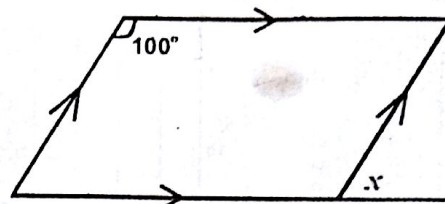
40. Construct triangle ABC when $AB = 6\text{ cm}$, $BC = 5\text{ cm}$ and angle $BAC = 50^\circ$. Draw a circle touching the vertices of the triangle. What is the radius of the circle?

- A. 3.3 cm B. 6.6 cm C. 2.1 cm D. 4.2 cm

41. A Covid-19 awareness meeting ended at 7.40 p.m. If it had lasted for $9\frac{3}{4}$ hrs. what time in 12 hour system had it started?

- A. 11.15 a.m B. 10.15 a.m
C. 9.55 a.m D. 5.25 p.m

42. Find the value of angle x .



- A. 100° B. 130° C. 80° D. 50°

43. Convert $7\frac{3}{8}$ to decimals, giving your answer to 2 decimal places.

- A. 73.75 B. 9.67 C. 7.38 D. 0.38

44. The mean height of 7 boys in a class is 50 kg. If the weight of six of them is 45 kg, 60 kg, 55 kg, 40 kg, 60 kg and 45 kg, find the sum of the mean and the mode.

- A. 45 B. 50 C. 95 D. 90

45. What is the sum of the square roots of 0.0009 and 0.0064?

- A. 0.89 B. 0.0073 C. 0.11 D. 0.0011

46. The marked price of a TV is Sh. 80 000. Joyce bought it on a hire purchase price and paid a deposit of Sh. 40,000 followed by 5 equal monthly instalments of Sh. 10,000 each. How much more than the marked price did he pay?

- A. Sh. 90,000 B. Sh. 40,000
C. Sh. 10,000 D. Sh. 50,000

47. What is:

$$\frac{6}{7} \times 12 \times \frac{4^2}{3} \div \frac{1}{2} =$$

- A. 96 B. $\frac{1}{48}$ C. 48 D. 24

48. What is half of:

$$4^2 + \sqrt{36 \times 3^2}$$

- A. 34 B. 11 C. 17 D. 22

49. Sam bought three hens at Sh. 500 each. He later sold them for Sh. 1800. Calculate his percentage profit.

- A. 260% B. 25% C. 20% D. $16\frac{2}{3}\%$

50. Which one of the following will complete the pattern?

