

ADDIS ABABA CITY ADMINISTRATION EDUCATION BUREAU
MIDDLE LEVEL SCHOOL LEAVING CERTIFICATE (GRADE 8)
EXAMINATION SENE 2015E.C/JUNE 2023G.C

GENERAL DIRECTIONS

THIS BOOKLET CONTAINS TWO EXAMINATIONS: **CITIZENSHIP AND MATHEMATICS**. EACH EXAMINATION IS TO BE DONE ON A SEPARATE ANSWER SHEET. THE TIME ALLOWED FOR EACH EXAMINATION IS EXACTLY **1 HOUR**.

THE FIRST PART IS **CITIZENSHIP EXAMINATION**, WHICH CONTAINS **60 ITEMS** AND THE SECOND PART IS **MATHEMATICS EXAMINATION**, WHICH ALSO CONTAINS **40 ITEMS**.

EACH QUESTION HAS FOUR CHOICES MARKED A, B, C, AND D. READ EACH QUESTION AND THE CHOICES CAREFULLY. THEN MARK YOUR CHOICE ON THE **SEPARATE ANSWER SHEET** YOU ARE PROVIDED.

USE ONLY PENCIL TO MARK YOUR ANSWERS. YOUR ANSWER MARK SHOULD BE HEAVY AND DARK THAT COVERS THE SPACE COMPLETELY. PLEASE ERASE ALL UNNECESSARY PENCIL MARKS COMPLETELY FROM YOUR ANSWER SHEET. IF YOU CHOOSE CHOICE "C", FOR EXAMPLE, MARK THE THIRD SPACE LIKE THE FOLLOWING:

A	B	C	D
☐	☐	☒	☐

IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY GO BACK AND REVIEW YOUR WORK. WHEN TIME IS CALLED, YOU MUST IMMEDIATELY STOP WORKING, LAY YOUR PENCIL DOWN, AND WAIT FOR FURTHER INSTRUCTIONS.

ANY FORM OF CHEATING OR AN ATTEMPT TO CHEAT IN THE EXAMINATION WILL RESULT IN AN AUTOMATIC DISMISSAL FROM THE EXAMINATION HALL AND CANCELLATION OF YOUR SCORE(S).

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

Number of Items: 40**Time Allowed: 1 Hour**

INSTRUCTION: READ EACH QUESTION AND CHOICES CAREFULLY. THEN MARK YOUR CHOICE ON THE SEPARATE ANSWER SHEET YOU ARE PROVIDED.

1. The number $3\frac{1}{5}$ as a single fraction is equal to

A. $\frac{16}{5}$

C. $\frac{14}{5}$

B. $\frac{4}{5}$

D. $\frac{9}{5}$

2. $-\frac{2}{3} + \frac{1}{3}$ is equal to

A. $\frac{1}{3}$

C. 1

B. $\frac{2}{3}$

D. -1

3. Which one of the following is true?

A. $\frac{1}{2} < \frac{3}{5} < \frac{7}{10}$

C. $\frac{1}{2} < \frac{7}{10} < \frac{3}{5}$

B. $\frac{7}{10} < \frac{3}{5} < \frac{1}{2}$

D. $\frac{3}{5} < \frac{7}{10} < \frac{1}{2}$

4. $\frac{3}{7} + \frac{1}{2} =$

A. $\frac{5}{14}$

C. $\frac{2}{7}$

B. $\frac{4}{9}$

D. $\frac{13}{14}$

5. The sum of two rational numbers is 3. If one of the numbers is $\frac{9}{4}$, then the other number is
- A. $\frac{3}{4}$ C. $\frac{1}{2}$
 B. $\frac{21}{4}$ D. $\frac{2}{3}$
6. $\left(-\frac{3}{4}\right) \times \left(-\frac{10}{9}\right) =$
- A. $\frac{27}{40}$ C. $-\frac{27}{40}$
 B. $\frac{5}{6}$ D. $-\frac{5}{6}$
7. If we divide $4\frac{1}{3}$ by $\frac{1}{6}$, the result is
- A. $4\frac{1}{18}$ C. 8
 B. 26 D. $\frac{13}{18}$
8. A bag contained 8.2kg of three type fruits. 2.5kg orange, 2.2kg banana and the rest is apple. Then the amount of apple is
- A. 2.5kg C. 3.5kg
 B. 2.8 kg D. 4.2kg
9. Which one of the following numbers is a squared number?
- A. 2 C. 6
 B. 4 D. 8
10. The area of a square is 196cm^2 . What is the length of one side of the square?
- A. 11cm C. 14cm
 B. 13cm D. 19cm

11. Table 1 yields the value $y = x^2$, $1 \leq x \leq 1.49$

By using the table $\sqrt{2.016}$ is equal to

A. 1.32

C. 1.42

B. 1.40

D. 1.46

Table 1

X	0	1	2	3	4	5	6	7	8	9
1.0	1.000	1.020	1.040	1.061	1.082	1.102	1.124	1.145	1.166	1.188
1.1	1.210	1.232	1.254	1.277	1.277	1.322	1.346	1.369	1.392	1.416
1.2	1.440	1.464	1.488	1.513	1.538	1.562	1.588	1.613	1.638	1.644
1.3	1.690	1.716	1.742	1.769	1.796	1.822	1.855	1.877	1.904	1.932
1.4	1.960	1.988	2.016	2.045	2.074	2.102	2.132	2.161	1.190	2.220

12. $\left(\frac{3}{4}\right)^3 = \underline{\hspace{2cm}}$

A. $\frac{9}{16}$

C. $\frac{27}{64}$

B. $\frac{27}{16}$

D. $\frac{9}{64}$

13. $\sqrt[3]{-64} = \underline{\hspace{2cm}}$

A. 4

C. -8

B. -4

D. 8

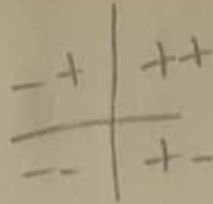
14. The volume of cubic box with side length equal to $\frac{1}{2}m$ is

A. $4m^3$

C. $\frac{1}{8}m^3$

B. $\frac{1}{4}m^3$

D. $8m^3$



15. A point (x, y) is located in the fourth quadrant. Then which one of the following is true about the coordinates of the point?

A. $x > 0$ and $y > 0$

C. $x < 0$ and $y > 0$

B. $x > 0$ and $y < 0$

D. $x < 0$ and $y < 0$

16. Which one of the following points is not on a line shown in Figure 1?

A. $(-1, -2)$

C. $(3, 0)$

B. $(2, -1)$

D. $(0, -3)$

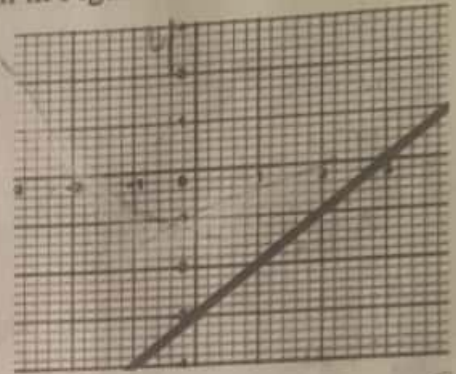


Figure 1

17. The solution of $2x + 3 < x - 1$ is

A. $x > 3$

C. $x < -4$

B. $x < -3$

D. $x < 2$

18. The sum of two consecutive integers x and y is less than 55. If x is the smaller number in the sum, then

A. $x < 54$

C. $x > 54$

B. $x < 27$

D. $x < 18$

19. Sum of two numbers is 95. If one exceeds the other by 15, then the smaller number in the sum is

A. 25

C. 35

B. 30

D. 40

20. Which one of the following are not necessarily similar figures?

- A. Any two triangles with their corresponding angles are equal.
- B. Any two triangles with their corresponding sides are equal.
- C. Any two right angled triangles with one of their angles 35° .
- D. Any two triangles with their altitude are equal.

21. Assume that $\triangle ABC$ is similar to $\triangle DEF$. If $AB = 7$, $AC = 15$, $DF = 6$ and $EF = 4$ then

$BC =$ _____

A. $\frac{14}{5}$

C. $\frac{56}{5}$

B. 10

D. $\frac{24}{5}$

22. Assume that $\triangle ABC$ is similar to $\triangle DEF$. If $AB = 4\text{cm}$, $BC = 5\text{cm}$, $AC = 8\text{cm}$ and

$DE = 8\text{cm}$, then perimeter of $\triangle DEF =$ _____

A. 17cm

C. 34cm

B. 25cm

D. $\frac{17}{2}\text{cm}$

23. The ratio of the corresponding sides of similar triangles is $\frac{2}{3}$. If the area of the smaller

triangle is 12cm^2 , then the area of the larger triangle is _____

A. 27cm^2

C. 18cm^2

B. 16cm^2

D. 15cm^2

24. The degree measure of angles of a triangle are x° , $2x^\circ$ and 60° . Then the value of x is

A. 10

C. 40

B. 20

D. 50

25. In the Figure 2, shown below the degree measure of $\angle ACB$ is equal to

- A. 30° C. 60°
B. 45° D. 65°

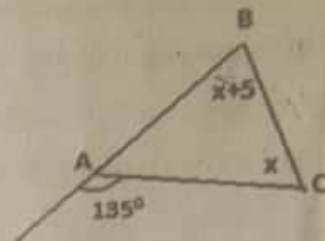


Figure 2

26. In the Figure 3, below the value of x is

- A. 4 C. 10
B. 6 D. $\sqrt{75}$



Figure 3

27. Which one of the following triplets does not represent lengths of sides of right angled triangle?

- A. 2cm, 3cm, 6cm C. 5cm, 12cm, 13cm
B. 3cm, 4cm, 5cm D. 6cm, 8cm, 10cm

28. Consider the circle shown in the Figure 4. If O is the center of the circle, which one of the following is **not** true?

- A. Line $\overline{AB}$ is tangent line to the circle.
B. Line $\overline{CD}$ is a secant line to the circle.
C. Line segment $\overline{EF}$ is a chord of the circle.
D. Line segment $\overline{CD}$ is a diameter.

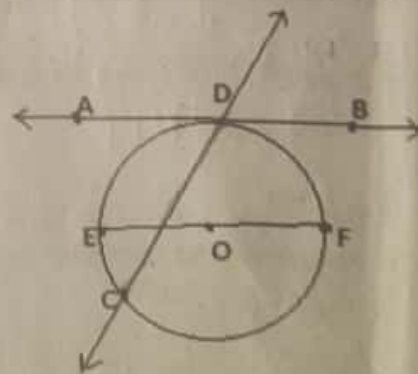


Figure 4

29. In Figure 5, if $m(\widehat{AB}) = 72^\circ$, then $m(\angle ACB)$ is ____

- A. 36°
 B. 45°
 C. 72°
 D. 144°

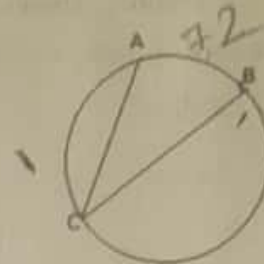


Figure 5

30. In the Figure 6, O is the center and $\overline{AB}$ a line segment that pass through O. If $m(\widehat{AE}) = 66^\circ$ and $m(\widehat{ED}) = 49^\circ$ then $m(\angle DOB)$ is equal to

- A. 65°
 B. 70°
 C. 72°
 D. 98°



Figure 6

31. A circular pizza in Figure 7 was cut into three parts in such a way that the arc length of each part are equal. What is the degree measure of $\angle BAC$?

- A. 30°
 B. 45°
 C. 60°
 D. 120°



Figure 7

32. In the pyramid shown in Figure 8, which one of the following is a base?

- A. Rectangle ABDC
 B. Rectangle EBDF
 C. Rectangle AEFC
 D. Triangle AEB

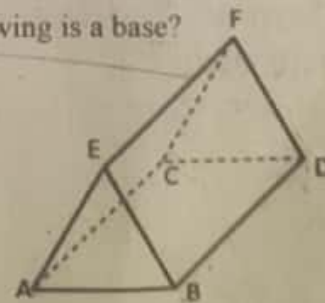


Figure 8

33. The total surface area of a pyramid shown in Figure 9 is

A. 420cm^2 C. 270cm^2
 B. 300cm^2 D. 179cm^2

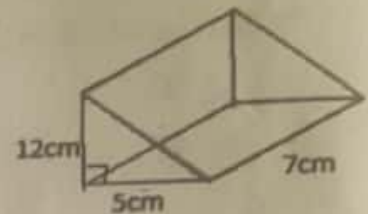


Figure 9

34. The total surface area of a cylinder with radius 1m and height 3m is

A. $2\pi\text{m}^2$ C. $8\pi\text{m}^2$
 B. $3\pi\text{m}^2$ D. $9\pi\text{m}^2$

35. The volume of a right circular cylinder with height 3cm and base radius 2cm is

A. $6\pi\text{cm}^3$ C. $16\pi\text{cm}^3$
 B. $12\pi\text{cm}^3$ D. $20\pi\text{cm}^3$

36. A cylindrical tanker of radius 2m and height 4m contains $8\pi\text{m}^3$ water. How much cubic meter of water is required to fill the tanker?

A. $2\pi\text{m}^3$ C. $4\pi\text{m}^3$
 B. $6\pi\text{m}^3$ D. $8\pi\text{m}^3$

37. The probability of an impossible event is

A. 0 C. $\frac{1}{2}$
 B. $\frac{1}{4}$ D. 1

38. The probability of choosing a letter 'I' randomly from the letters of the word 'PHILIPPINES' is

A. $\frac{3}{11}$ C. $\frac{4}{9}$
 B. $\frac{3}{7}$ D. $\frac{5}{11}$

39. A box contains 12 cards numbered from 1 to 12. One card is drawn randomly from the box. The probability of the number to be odd is

A. $\frac{1}{12}$

C. $\frac{2}{3}$

B. $\frac{1}{2}$

D. $\frac{1}{4}$

40. Assume that the arrow in Figure 10 point to the numbers 1, 2, 3, ..., 12 only. What is the probability of pointing to an odd number?

A. $\frac{1}{2}$

C. $\frac{3}{4}$

B. $\frac{1}{12}$

D. $\frac{2}{3}$



Figure 10