

R&PUBLIC OF SOMALILAND

FORM EIGHT EXAMS, 2016

MATHEMATICS



NATIONAL EXAMINATION BOARD





SOM EXAMS

Total Score

Name.....

School.....

Roll No.....

Republic of Somaliland

Ministry of Education and Higher Education
Somaliland National Examination Board

GRADE 8

MATHEMATICS

2015-2016

TIME: 2 HOURS

Plus 10 minutes for Reading through the paper

INSTRUCTIONS TO CANDIDATES

This paper consists of **10** printed pages with the cover page.
Count them now. Inform the invigilator if there any missing or extra.

PART 1: 30 Multiple Choice Questions 60 Marks

PART 2: 8 Structured Questions 40 Marks

TOTAL 100 Marks

- Answer all questions part 1AND 2.
- No Extra papers



Part 1: Multiple Choices Questions

(60 marks)

- 1- Which of the following numbers is not a square?
a. 36 b. 96 c. 225 d. 121
- 2- 58_{10} when changed to base five becomes:
a. 314_5 b. 213_5 c. 132_5 d. 231_5
- 3- The next number to the sequence 15, 22, 29, 36, is:
a. 53 b. 39 c. 43 d. 49
- 4- Find the square root of $\frac{225}{576}$ in order to get:
a. $\frac{25}{26}$ b. $\frac{25}{24}$ c. $\frac{15}{16}$ d. $\frac{15}{24}$
- 5- What is the value of $\frac{0.48 \times 0.305}{0.006}$
a. 12.8 b. 13.8 c. 28.4 d. 24.4
- 6- 35% of water dripped from a tank throughout the night. Only 940 liters remained. How many liters of water did the tank drip out?
a. 329 b. 453 c. 307 d. 293
- 7- Evaluate : $4\frac{3}{8} \div (1\frac{5}{8} - \frac{3}{4})$ in order to obtain :
a. $\frac{1}{5}$ b. $\frac{5}{64}$ c. 5 d. $\frac{7}{5}$
- 8- The circumference and diameter of a circle has 3:1 as the ratio of their lengths. Find the circumference of the circle whose diameter is 4.5 cm.
a. 17.5 b. 9.5 c. 13.5 d. 11.5
- 9- Divide 672 shillings among Ali, Omer and Awil in the ratio 7:5:9. Then Ali will get:
a. 288 sh. b. 264 sh. c. 260 sh. d. 244 sh.

10- 0.875 is equivalent to :

- a. $\frac{9}{7}$ b. $\frac{6}{5}$ c. $\frac{7}{8}$ d. $\frac{5}{6}$

11- In the equation; $\frac{1}{s} = \frac{1}{r} + \frac{1}{t}$, find s if $r = 12$, $t = 18$:

- a. 7.2 b. 5.6 c. 6.4 d. 8.8

12- Solve $2(2x - 5) = 3(x - 4)$

- a. 2. b. 3 c. -2 d. -3

13- A rectangle has its length twice its breadth. If the perimeter is 18 cm, what will the length be?

- a. 12 cm. b. 6 cm. c. 8 cm. d. 10 cm.

14- The numbers of the passengers of 9 buses were:

17, 31, 11, 3, 51, 49, 52, 47, 34

What will be the median number of those people?

- a. 34. b. 47. c. 31 d. 52.

15- The mode of the numbers 5, 7, 12, 12, 17, 17, 19, 21 was:

- a. 17 b. 19. c. 21 d. 12

16- The number 0.0000532 when written in standard notation :

- a. 53.2×10^{-5} . b. 532×10^{-5} . c. 5.32×10^{-5} . d. $.532 \times 10^{-5}$.

17- The volume of barrel whose radius is 7 meters, height is 2 meters, will be?

- a. $803 M^3$. b. $308 M^3$. c. $8.03 M^3$. d. $.3.08 M^3$

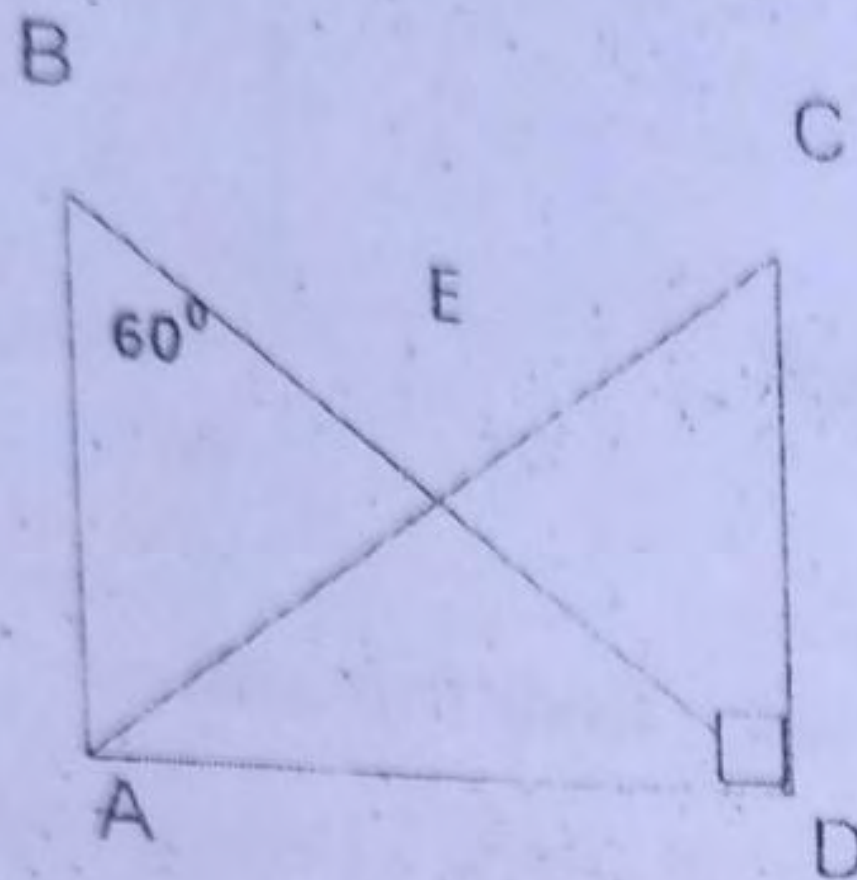
18- A lorry travelled at 80 km/hour. If it travelled for 5 hours, what is the distance it covered in that time?

- a. 450 km. b. 200 km c. 300 km. d. 400 km

Simplify $(2^3)^2 \times (2^8)$

- a. 2^{48} b. 2^{14} c. 3^{14} d. 3^{48}

20- In this figure, the angle $ADC = 90^\circ$ $AB \parallel DC$

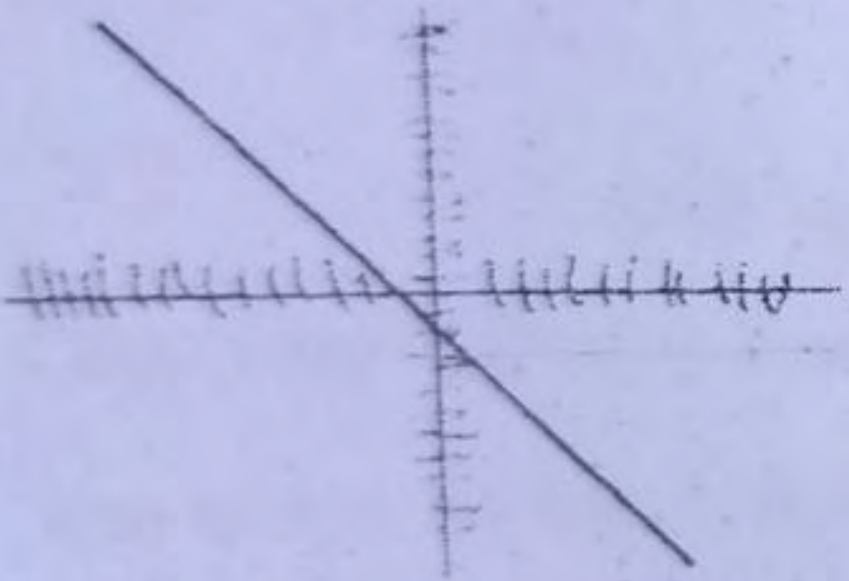


The angle $ABD = 60^\circ$ then, the value of angle ADB is:

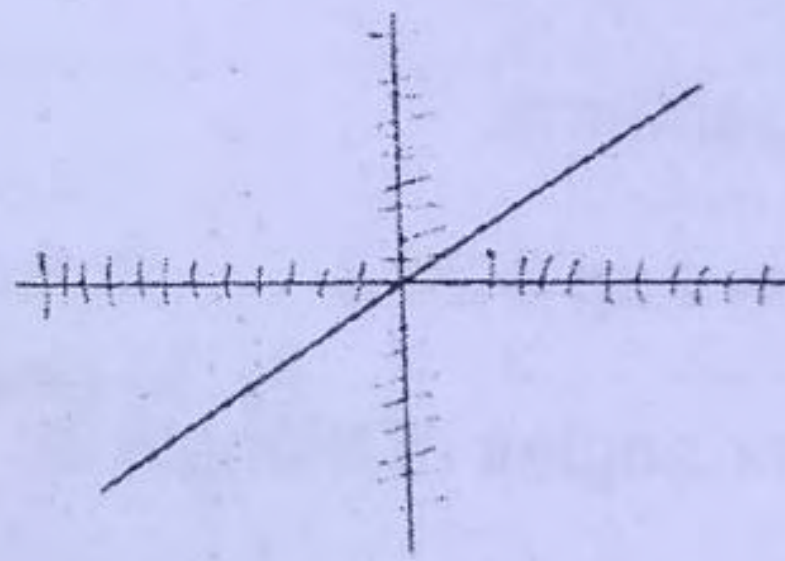
- a. 60° b. 45° c. 120° d. 30°

21- Graph of $2y = 3x + 1$ is :

b.



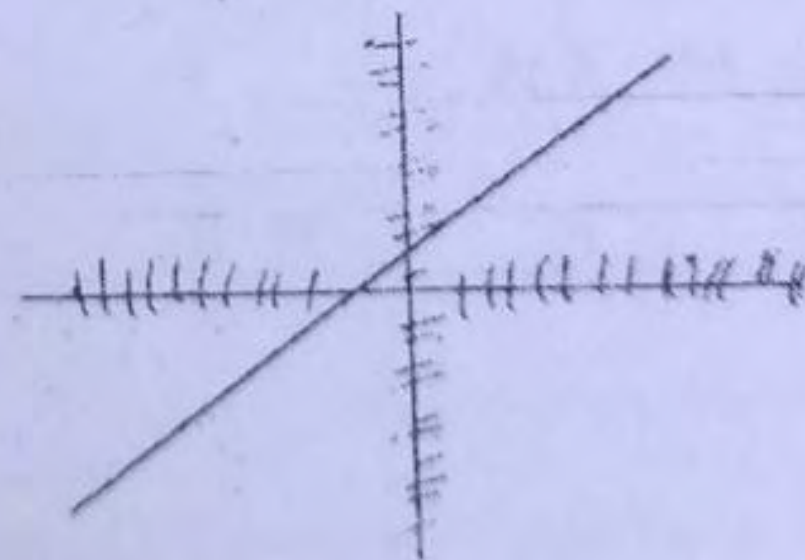
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J.



x.)



22- The number 1235×10^{-2} is equal :

- a. 123.5 b. 12.35 c. 1.235 d. 0.1235

23- 32450 grams is equal to :

- a. 324.50 kg b. 3.2450 kg c. 32.450 d. 3245.0 kg



24- Solve $2^{2x} = 16$

a. $x = 4$

b. $x = 2$

c. $x = -2$

d. $x = -4$

25- The figure shows:

$AE = EB$, $\angle EBC = 60^\circ$

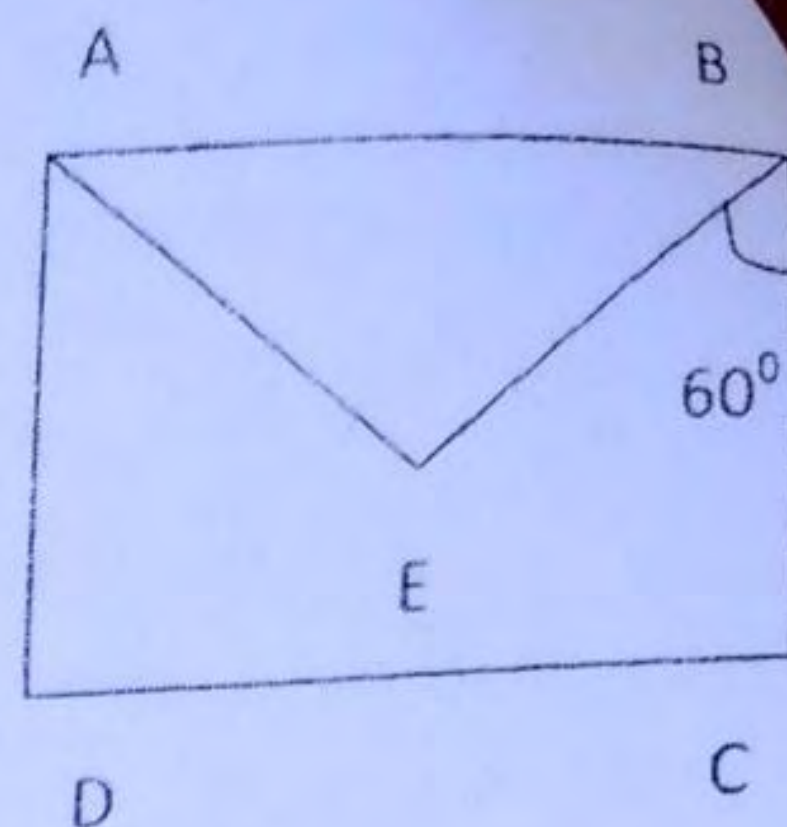
Angle AEB is

a. 45°

b. 35°

c. 38°

d. 30°



26- 5 men built two rooms in 9 days. How many days will it take the same two rooms to be built by 3 men?

a. 12 days

b. 27 days

c. 45 days

d. 15 days

27- $\log_3 9 = 2$ when changed to powers will be:

a. $9 = 2^3$

b. $9 = 3^2$

c. $3 = 9^2$

d. $3 = 2^9$

28- Change $8 = 2^3$ to logarithms:

a. $\log_2 8 = 3$

b. $\log_8 2 = 3$

c. $\log_3 2 = 8$

d. $\log_3 8 = 2$

29- The sum of the interior angles of triangle is:

a. 30

b. 90

c. 180

d. 27

30- $2^{x+1} = 32$, the value of X is :

a. 2

b. 4

c. 6

d. 8



Structured Questions

(40marks)

Complete the table by

a) changing base ten to base five

(5 marks)

base 10	46	39	98
base 5			

b) The mean of the ages of three girls is 9. Two of them are aged 11 and 7.
Find the age of 3rd girl?

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Q2: a) Calculate Y of the line through (3, 1) and (4, y),

the slope of the line is $m = 7$?

(5marks)

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b) Completely factorize: $36x^5 - 9x^3$

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Q3: a) If the universal set is:

$$G = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$$

$$A = \{2, 3, 4, 5, 9\}$$

$$B = \{3, 4, 5, 8\}$$

Find:

i) $\bar{A} \cup B$

ii) $\bar{A}$ (A complement)

b) What is the intersection of the sets:

$$A = \{2, 4, 6, 8, 10\}, B = \{12, 14, 16, 18\}$$

Q4: a) Solve the equation: $X^2 + 2X - 15 = 0$

(5 marks)

b) The number of the pupils of school were increased from 1000 to 1200. Find the Percentage increase?



a) The age of the son?

(5marks)

b) The age of the father?

Q6: A cylinder with volume 616 m^3 , has radius 7 m. Calculate the height of the cylinder?

(5 marks)

Q7) a) Write this number in scientific notation. 0.005431

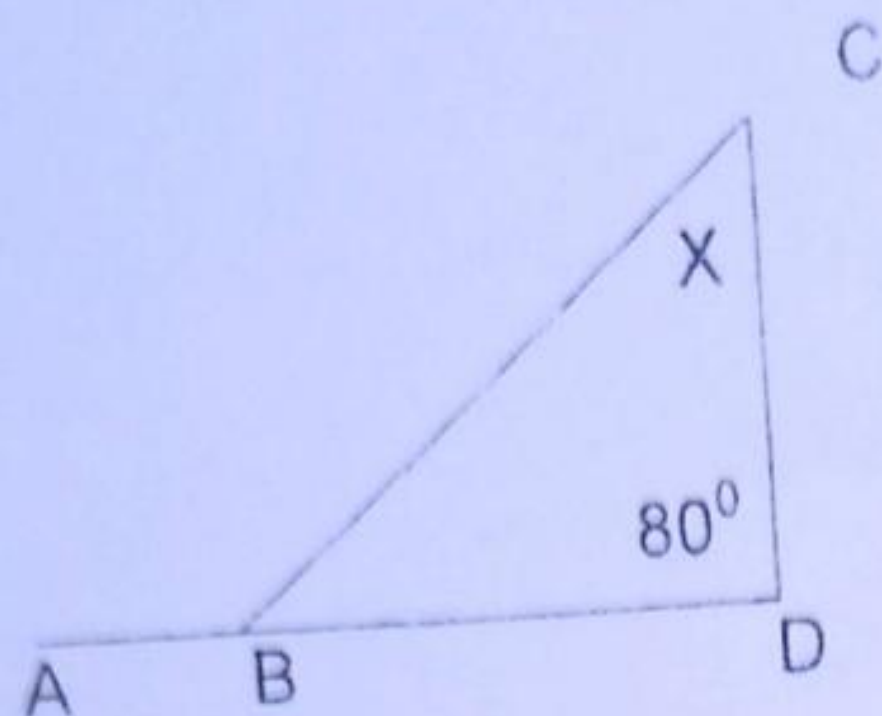
(5 marks)

b) Write this number 5.43×10^{-5} as a normal number:



(5 marks)

Q8) Given



If $DC = DB$, Find angle ABC ?

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END