R&PUBLIC OF SOMALILAND

FORM EIGHT EXAMS, 2019

MATHEMATICS

2019

NATIONAL EXAMINATION BOARD

SomExams

TOTAL

Name .....

School .....

Roll No .....

REPUBLIC OF SOMALILAND

MINISTRY OF EDUCATION AND SCIENCE
SOMALILAND NATIONAL EXAMINATION AND CERTIFICATION BOARD

GRADE 8

MATHEMATICS

JUNE 2019

2 HOURS

PLUS 10 MINUTES FOR READING THROUGH THE PAPER

INSTRUCTIONS:

- This paper consists of **13** printed pages.
- Count them now. Inform the invigilator if there are any pages missing or extra ones.

This Exam consists of **TWO** parts:

Part One	:	30 Multiple Choice	60 Marks
Part Two	:	8 Structured Questions	40 Marks
		TOTAL	**100 Marks**

- Answer **ALL** questions in Part 1 and Part 2.
- Calculator, Mobile and extra papers are not allowed

SOM EXAMS

Work On This Sheet As A Rough, No Marking

PART ONE : Multiple Choice

(30 x 2 = 60 Marks)

Circle the correct answer only

1. Add $1\frac{1}{2} + 3\frac{2}{3}$:

a) 5 b) $4\frac{5}{6}$ c) $5\frac{5}{6}$ d) $5\frac{1}{6}$

2. Calculate the radius of the circle whose circumstance is 44 cm.

a) 14 cm b) 21 cm c) 7 cm d) 22 cm

3. Write this number 0.000075 in scientific notation

a) 7.5×10^{-5} b) 7.5×10^{5} c) 7.5^4 d) 7.5×10^{-4}

4. The value of the variable d of this equation $\frac{1}{2}d^2 = 18$ is:

a) 6 b) -6 c) ± 6 d) 9

5. $\sqrt[3]{2\ \frac{10}{27}}$ is:

a) $2\frac{1}{3}$ b) $2\frac{2}{3}$ c) $1\frac{2}{3}$ d) $1\frac{1}{3}$

6. Write this $16 = 4^2$ in logarithmic form:

a) $\text{Log}_2\ 16 = 4$ b) $\log_4 16 = 2$ c) $\log_2 4 = 16$ d) $\log_4 2 = 16$

7. In Sheikh Bashir School there are 720 students. The ratio of the boys and grils is 5:3 respectively. How many the boys are greater than girls ?

a) 180 b) 450 c) 270 d) 120

8. Simplify $6^2 \times 3^{-2}$

a) 3 b) -3 c) 4 d) -4

9. The factors of $6y^2 - 7y + 2$ are :

a) (2 y + 1) (3 y + 2)

b) (2y – 1) (3 y – 2)

c) (2y – 1) (3y + 2)

d) (-2 y + 1) (-3y + 2)

10. $(1224)_5 + (2233)_5$ is:

a) $(3457)_5$

b) $(4222)_5$

c) $(4112)_5$

d) $(4012)_5$

11. Convert 3.6 ton, into Kilogram :

a) 360 kg

b) 36 kg

c) 3600 kg

d) 36000 kg

12. $3m^3$ is equal to:

a) 300 sm^3

b) 30,000 sm^3

c) 3,000,000 sm^3

d) 3000 sm^3

13. The sum of the square of two consecutive interferes is 85, find the two integers?

a) (5, 6)

b) (7, 8)

c) (9, 8)

d) (6, 7)

14. Solve $3x - 6 + 2 = 12 - x$

a) 3

b) 4

c) – 4

d) - 3

15. The value of x in this equation $5x^2 - 125 = 0$ is :

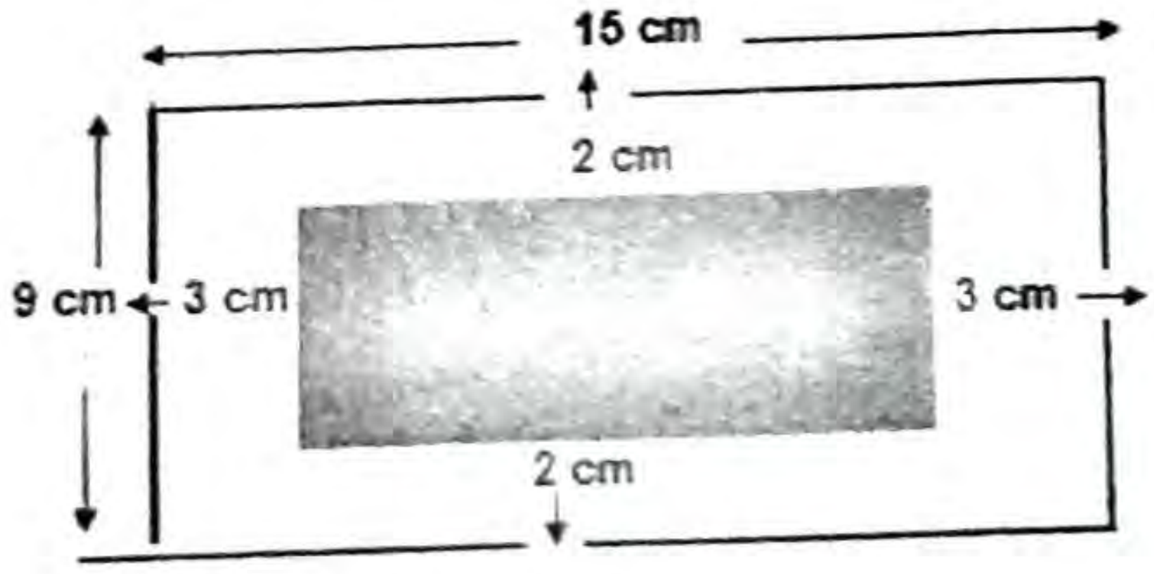
a) 5

b) ± 5

c) 15

d) – 25

16. Given this figure



Find the area of the shaded part:

a) 45 cm^2

b) 90 cm^2

c) 33 cm^2

d) 135 cm^2

17. A car covered a distance of 150 km in 2 hours. At the some time the driver covered a distance of 190 km in another 2 hours. Calculate the average velocity of the car ?

a) 75 km/s b) 95 km/s c) 85 km/s d) 90 km/s

18. Work out $4\frac{3}{8} \div (1\frac{5}{8} - \frac{3}{4})$

a) $\frac{1}{5}$ b) $\frac{5}{64}$ c) 5 d) $\frac{7}{5}$

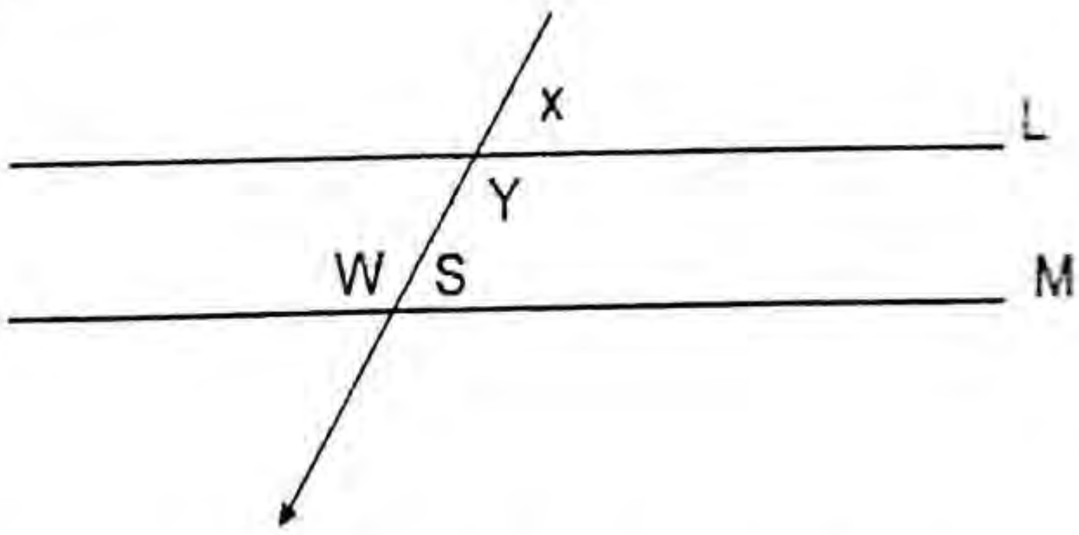
19. The sum of the exterior angles of 6 sided polygon is:

a) 540^0 b) 180^0 c) 720^0 d) 360^0

20. Find the mean of this numbers: 1, 3, 5, 6, 7, 8, 12, 5, 2, 11

a) 5 b) 7 c) 8 d) 6

21. In this figure



L and **M** are parallel lines. Therefore Angle **Y** and angle **W** are :

a) corresponding angles b) Opposite angles

c) Alternative angles d) Complementary angles

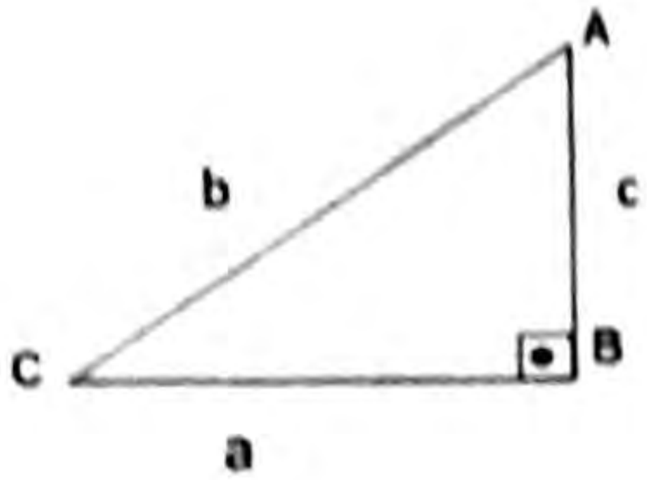
22. The medium of these numbers 2, 3, 7, 5, 9, 12, 5, 11, 5 is:

a) 5 b) 9 c) 7 d) 6

23. The sine formula is found by :

b) $\frac{\text{Opposite}}{\text{Adjacent}}$ b) $\frac{\text{Hypotenuse}}{\text{Opposite}}$ c) $\frac{\text{Adjacent}}{\text{Hypotenuse}}$ d) $\frac{\text{Opposite}}{\text{Hypotenuse}}$

24 In this figure below



The length of the b is equal to :

a) $a + c$ b) $a^2 + c$ c) $a^2 - c^2$ d) $a^2 + c^2$

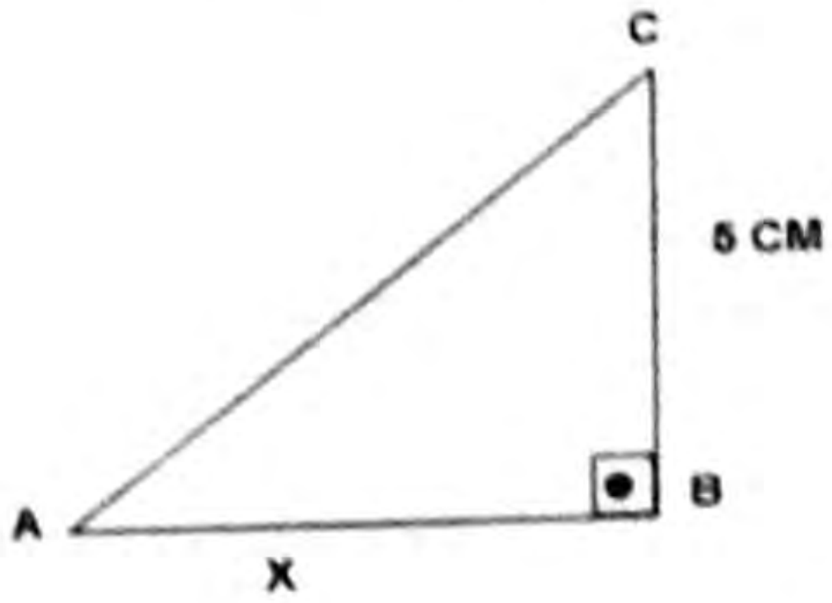
25. Sunia has a refrigerator with drinks of the same size, 4 Mangoes, 6 apples, 3 lemons and 7 banana milk. What is the probability of getting one Mango?

a) $\frac{1}{2}$ b) $\frac{1}{5}$ c) 0.3 d) $\frac{4}{10}$

26. A die is tossed. What is the probability of getting a number divisible by 2.

a) $\frac{1}{3}$ b) $\frac{1}{2}$ c) $\frac{2}{3}$ d) $\frac{1}{6}$

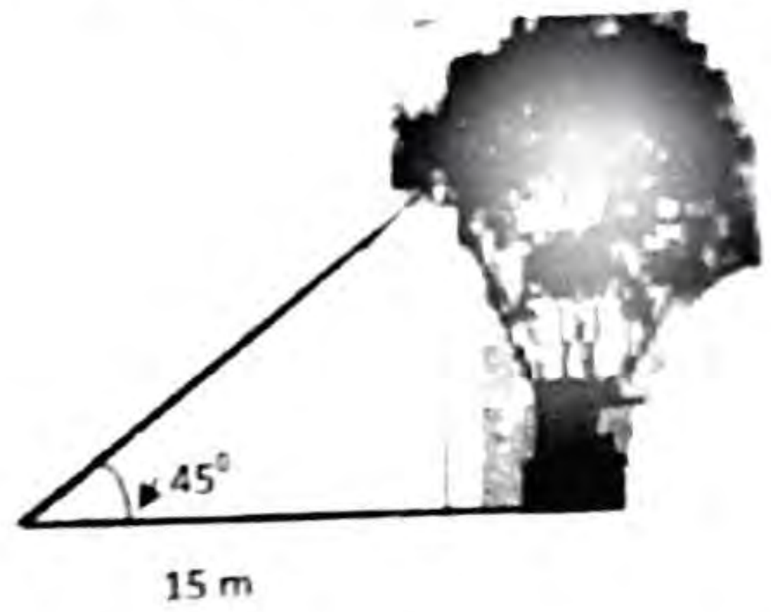
27 Given triangle ABC below



Find the value of X if the area of the triangle is 30 cm^2

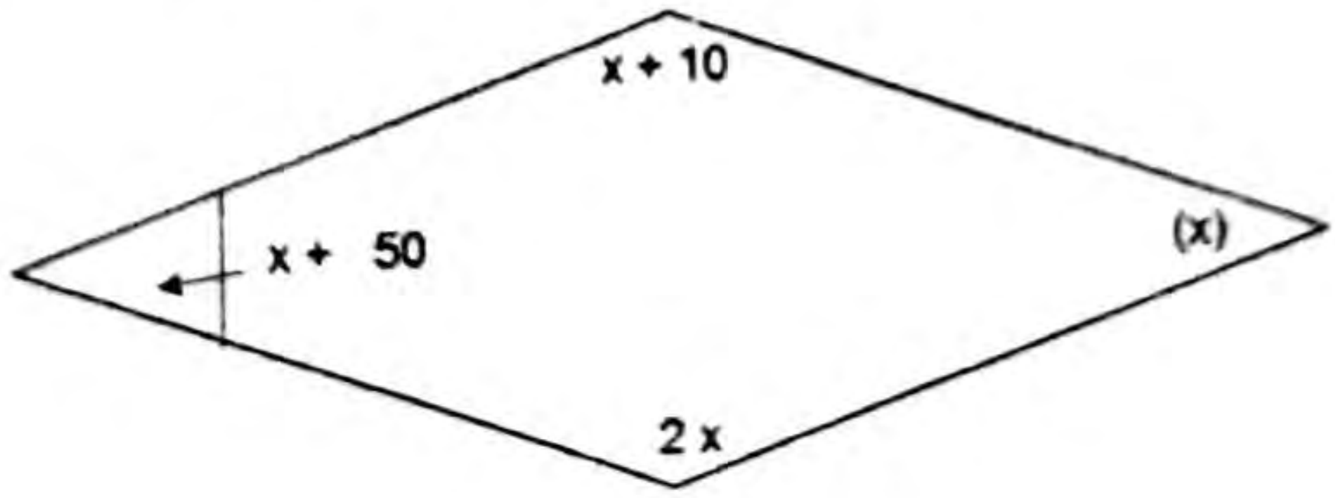
a) 6 b) 12 c) 8 d) 3

28. A man stands at a distance of 15 m from a tree. If the angle of elevation to the top of the tree is 45^0. What is the height of the tree?



a) 14 m b) 13 m c) 12 m d) 15 m

29. Given this figure below:



Find the value of the variable **X** on the above quadrilateral:

a) 15^0 b) 50^0 c) 100^0 d) 60^0

30. The difference of the following data 10, 8, 6, 12, 20, 11, 15, 7, 18 is:

a) 12 b) 10 c) 8 d) 14

PART TWO : STRUCTURED QUESTIONS
Answer all Questions

(8 x 5 = 40 points)

1. Amina bought a watch with 120,000 shillings. Few days after she sold it again with 115, 000 shillings.

   a. Did she gain or lost ? How much ? (2 points)

   b. What is the percentage gained or lost? (2 points)

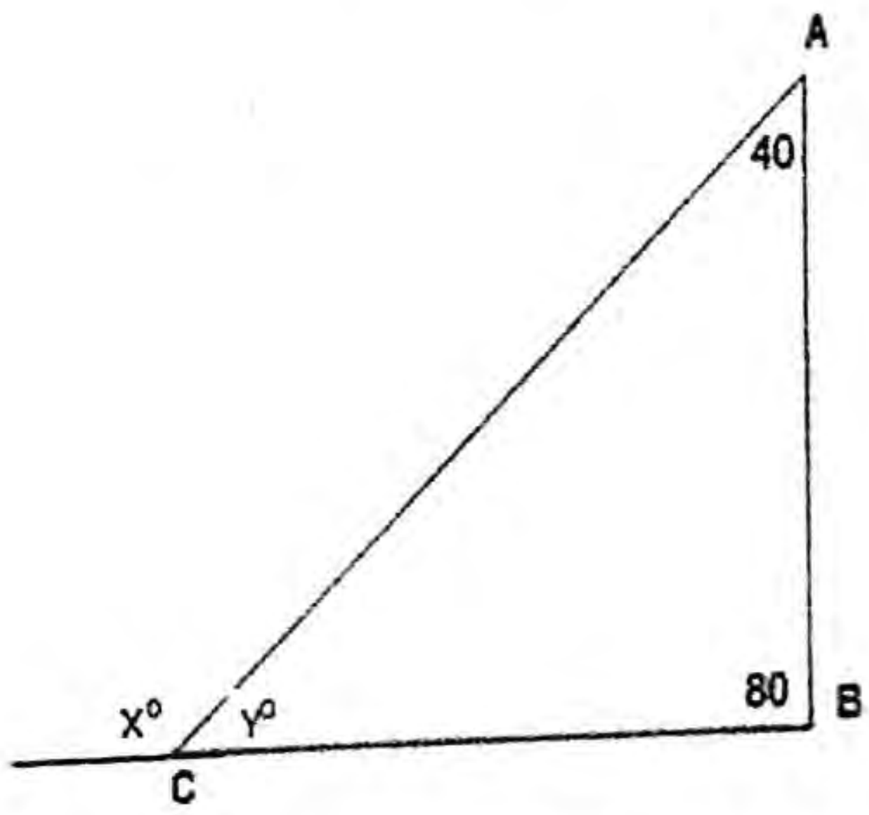
2. Solve the following simultaneous equation : (2 points)

   a) $2x + 3y = 12$
   $x - y = 1$

b) Solve this equation using Quadratic formula : (2 points)

$3x^2 - 14x + 8 = 0$

3. Given the below triangle ABC:

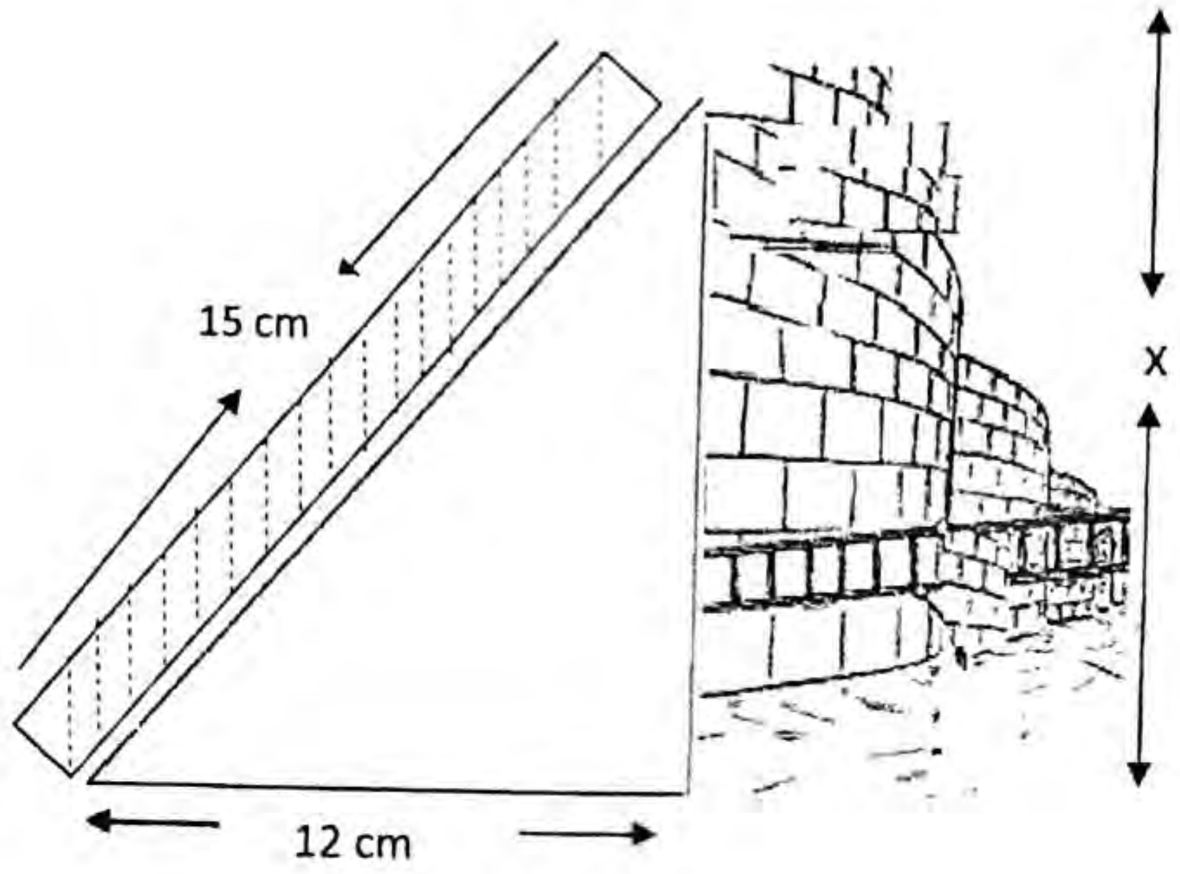


If $\measuredangle A = 40^0$, and $\measuredangle B = 80^0$, find angle :

a) Y^0 (3 Points)

b) X^0 (2 Points)

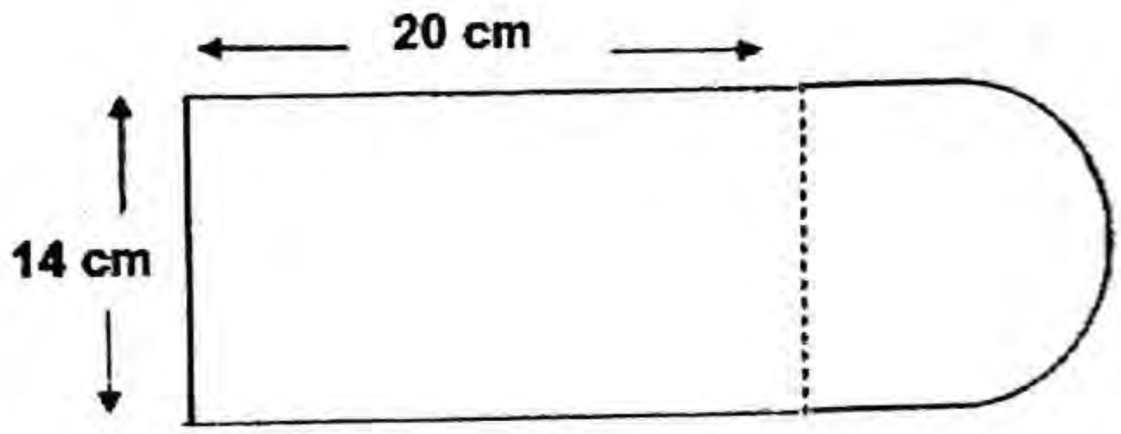
4. A leader of 15 cm was leaned against a wall. If the base of the ladder is 12 cm, away from the wall :



a) What is the height of the wall? (3 Points

b) What will be the perimeter of the triangle found? (2 Points)

5. In the figure below.



Calculate:

a) The perimeter of the figure? (3 points)

b) The area of the rectangle ? (2 points)

6. If Log 2 = 0.3010
Log 3 = 0.4771
Log 5 = 0.6990

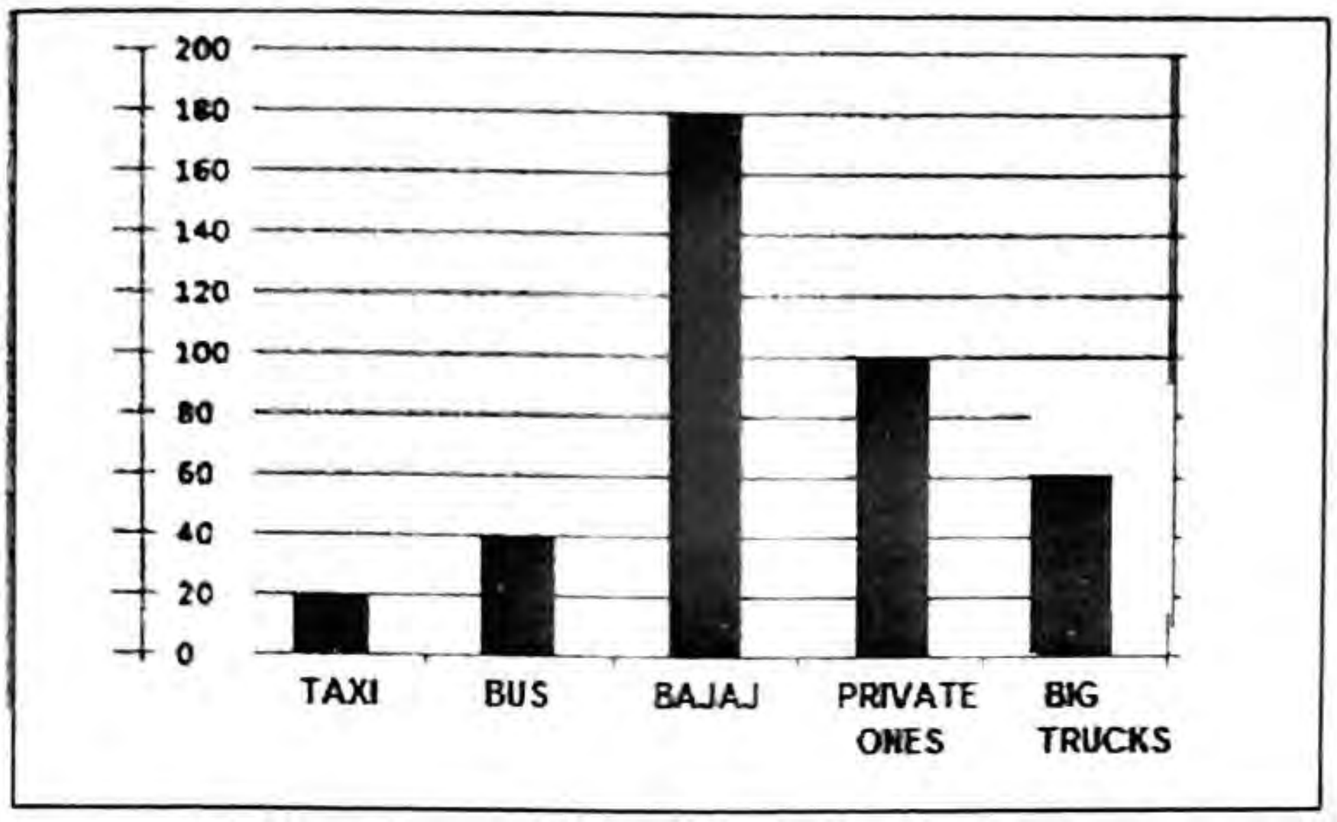
Find

a) Log 10 (1Point)

b) Log 30 (2 Points)

c) Log 225 (2 Points)

7. The data shown in the below bar-graph is the total number of vehicles in Borama.



a) Which kind is the smallest in number? (1 point)

b) What is the percentage of the Bajaaj ? (2 points)

c) What is the percentage of the private ones? (2 points)

8. A straight line joins these two points

A (-3, 1) and B (1, 9) :

a) Find the slope of the line (2 points)

b) Find the equation of the line (3 points)

-DHAMAAD-