

Sri Jayawardanapura Education Zone

Midterm evaluation - 2014

Mathematics

grade 8

Name:..... Time: 2 hours

PART I

Answer all the questions on this paper itself.

1) What is the 23rd even number?

2) Fill in the blank

$$\frac{\square}{7} = (-1)$$

3) Area of a square is $81a^2$. Kasun told that to find the side he can use $\sqrt{81a^2}$

i. Is this statement true or false?

ii. Find the length of a side of that square.

4) $(20)^3 = 4^3 \times \dots\dots\dots$ Fill in the blanks.

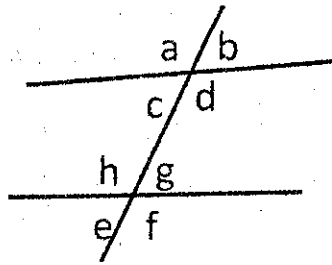
5) Simplify $\frac{3}{4} \times \frac{2}{9}$

6) Find the value of $0.36 \div 0.4$

7) A sum of money was divided between Nadeesha and Hirun in the ratio 2:3. If Nadeesha received Rs.150. Find the total amount they shared.

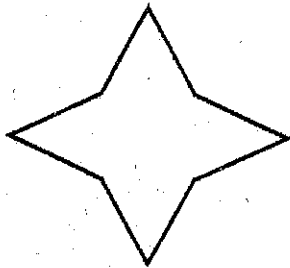
8) A Student got 38 marks out of 50 for a paper. Present this mark as a percentage.

9) Write two corresponding angles in the given figure.

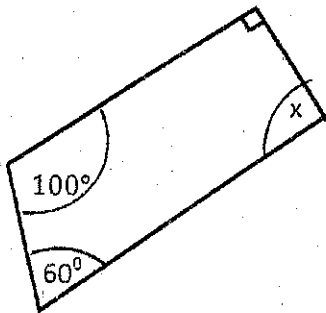


10) Write how many edges and vertices are there in a octahedron?

11) What is the order of rotational symmetry in given figure?



12) Using the given data and find the value of x in the following figure.

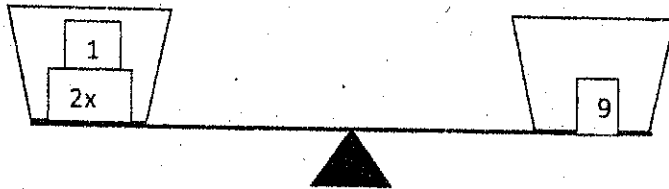


13) Remove the brackets and simplify.

$$3(a - b) + b$$

14) Fill in the blanks + x y = x (x +)

15) Using the weighing scale shown in following figure. Write an equation to find x and find the value of x.

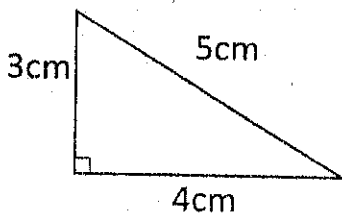


16) If $A = \{\text{square numbers between 1 and 25}\}$. Find the value of $n(A)$.

17) Equilateral triangle is drawn on a side of a square. If a side of a square is x, find the perimeter of the composite plane figure.

18) A lorry of mass 2t 350kg is loaded with 1t 500kg. Find the total mass of the lorry.

19) Find the area of the given triangle.



20) Sri Lanka is in $+5\frac{1}{2}$ time zone and Melbourne in Australia is in +10 time zone. When the time in Sri Lanka is 1300h what is the time in Melbourne.

(marks 2x20=40)

PART II

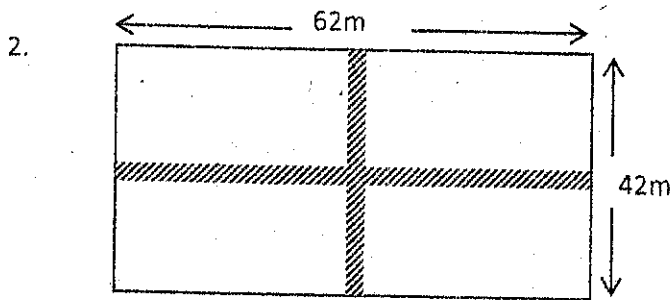
Answer the 1st question and other 4 questions. (First question carries 16 marks and other questions will carry 11 marks each.)

1. a) Recall the assignment that you made about the ratio and percentage.
- Mention names of places that you have used to gather information to make the wall paper. (1 mark)
 - Name two persons who helped you to do that task. (2 marks)
 - The following table is the assignment, made by a certain student, some parts were missing of it. Complete these missing blanks.

Description	Ratio	As a fraction	As a percentage
Concrete mixture was made using cement and sand	1:5	$\frac{1}{5}$	.....
Mixture of sugar and flour to make sweet	3:4	.....	.....
Exterior and interior angles of a polygon	.....	$\frac{1}{2}$	.....
Indigenous medicine made of "Aralu" and "Bulu"	.....	.....	25%

(1×7=7 marks)

- b) Nuwan invested Rs.50 000 and started a business on the 1st of January. Sugath and Sunil invested Rs.30 000 each and joined the business on the 1st of May. They gained a profit of Rs.36 000 at the end of the year. Profits are to be divided according to the money invested in relation to time.
- What is the ratio in which profit are to be divided between Nuwan, Sunil and Sugath? (3 marks)
 - Represent the profit gained by Nuwan as a fraction. (1 mark)
 - Find the profit gained by Nuwan. (2 marks)

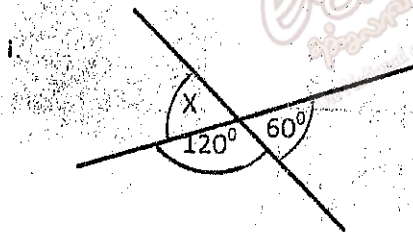


The above figure shows the way how a rectangular land of length 62m and breadth 42m was divided in to 4 equally. Shaded part is a road. Breadth of the road is 2m.

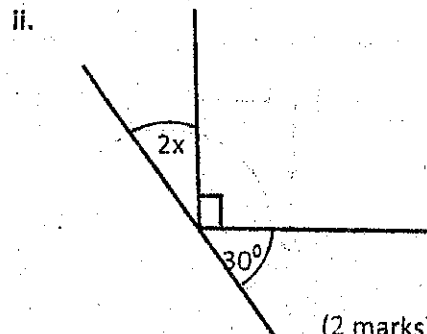
- i. Find the length of a part of that land. (2marks)
- ii. Find the Breadth of a part of that land. (2marks)
- iii. Find the area of a part. (2marks)
- iv. Find the total area of those lands. (2marks)
- v. Find the area of the road. (3marks)

3.

a) Find the value of x given in the following figures.

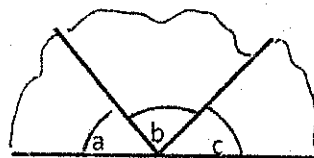
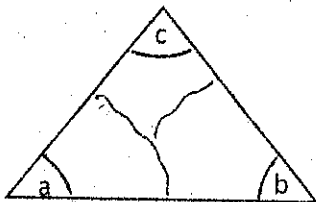


(1 marks)



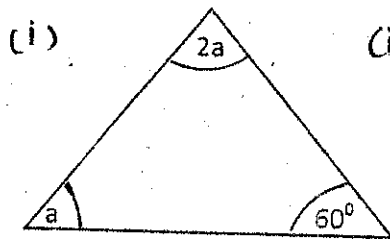
(2 marks)

b) The following figure shows an activity done by a student. What is the conclusion that can be arrived regarding interior angles of a triangle?

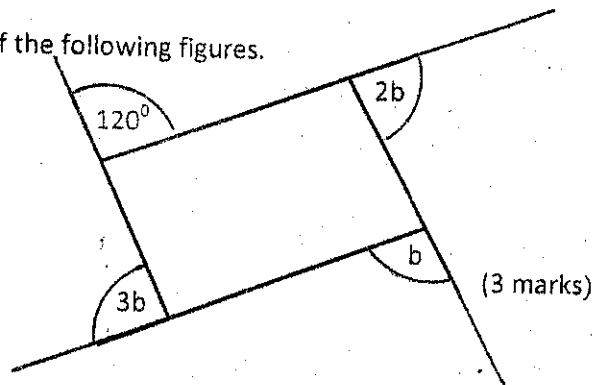


(2 marks)

c) Find the value of a and b in each of the following figures.



(ii)



(3 marks)

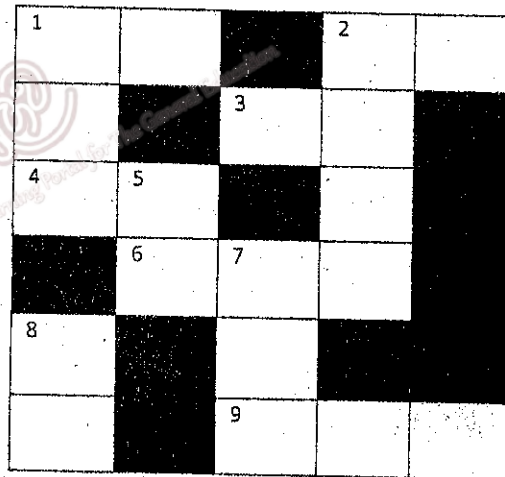
4. Using the clues given below .Fill in the blanks given in the following puzzle.

Across

- 1) If $x=5$, value of $x+8$
- 2) Length of side of a square which has the area of 625cm^2
- 3) Value of $\sqrt{100}$
- 4) If $2a - 3 = 27$,value of a
- 6) $2\frac{1}{4}$ as a percentage
- 9) If $a=3, b=5$ and $c=7$, value of ab^2c

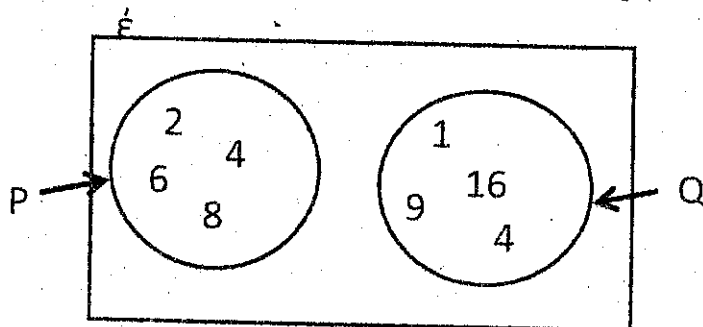
Down

- 1) Value of 11×11
- 2) Value of $3^4 \times 5^2$
- 5) If $3p = 156$, value of p
- 7) If $\frac{x}{5} = 41$,value of x
- 8) If $2(x+1) = 28$,value of ab^2c



(1×11=11marks)

5) a)Using the below Venn diagram answer the following questions



- I. Represent set P as a list.
- II. Represent set Q as a description

(2 marks)

(2 marks)

- III. Fill in the blank using set notation. 2 P (2 marks)
- b) Write two examples for Nul set. (2 marks)
- c) i) . Write an example for a set in which $n(A)=4$ (1 mark)
- ii) A certain student said that $B = \{\emptyset\}$ is a nul set. Do you agree? Give reasons for your answer. (2 marks)

- 6.
- I. Write 2 equivalent fractions to $\frac{3}{5}$ (2marks)
- II. $1\frac{1}{2} \div 2\frac{2}{5}$ simplify (3marks)
- III. Find the value of $6.06 \div 0.003$ (3marks)
- IV. Complete the following blanks.

Multiplicand	Multiplier	Number of decimal places in the product
2.1	4.02	.....
9.006	1.2	.....
1.32	0.3333	.....

(1×3marks)

- 7.
- I. Which square number is 225? (1mark)
- II. What is the 18th triangular number? (2marks)
- III. Write the first 5 terms of a number pattern which has a common (general) term $2n - 3$ (5marks)
- IV. Find the general term of the number pattern 0, 2, 4, 6, 8 (3marks)