

Department of Education - Western Province

Year End Evaluation - 2013

Grade - 8
Mathematics

11

Name / Index No:

Time : 2 Hours

- * Answer all the questions 1 to 20 on this paper itself.
- * Two marks each for questions 1 – 20.

Part - I

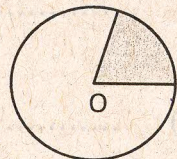
1. Simplify.

(i) $(-8) + 3$

(ii) $(-3) \times (-4)$

2. Simplify. $(5a)^2$

3. Write the name of the shaded portion in the circle with center O.



4. Solve. $2x + 3 = 7$

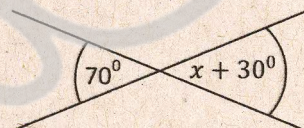
5. There are 40 children in a class. 24 are girls. Express the number of girls as a percentage.

6. (i) Find the complement of 82° .

(ii) Find the supplement of 82° .

7. Remove the brackets and simplify. $3(x + 2) - 2x$.

8. Find the value of x



9. Write two examples for platonic solids.

(i)

(ii)

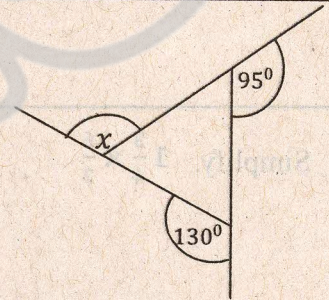
10. Find the value of $\sqrt{2^2 \times 3^2}$

11. Write 14265kg in metric tons and kilograms.

14265kg =tkg

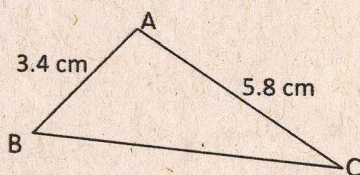
12. Factorise . $a^2b - ab^2 + 2ab$

13. Find the Value of x according to the data given in the figure.

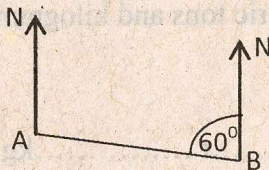


14. Sri Lanka is in $+5\frac{1}{2}$ time zone and the country Chillie is in -4 time zone. Find the time in Sri Lanka, when the time in Chillie is 1030h.

15. Find the length of BC, if the perimeter of the triangle ABC is 15cm.



16. Find the bearing of A from B.



17. (i) Write the shaded portion as a fraction of the whole figure.



(ii) Write it as a ratio.

18. Simplify. $1\frac{3}{4} \times \frac{6}{7}$

19. Find the value of $6 - a$, when $a = -2$.

20. Solve the inequality $4 - 3x > -17$ and find the highest whole number solution.



Part - II

* Answer the first question and 4 more questions.

* First question carries 16 marks and other questions carry 11 marks each.

- 01) a) Remind the “booklet” you prepared for the lesson Representation of Data, with the guidance of your teacher
- i) Write two topics that you are assigned to collect data to prepare the “booklet”.
 - ii) Write two methods can be used to represent data.
 - iii) Write two representative values you used, when preparing the booklet.
- b) The incomplete table given below is about the marks obtained by a group of students for an assessment out of 10 Marks.

Marks x	Number of Student (f)	$f \times x$
4	3	12
5	4	20
6	6
7	49
8	6
9	36

- i) Copy the above table on to your answer script and fill the blanks.
 - ii) Find the mean mark obtained by a student.
 - iii) Write the mode of the marks obtained.
 - iv) If a student is selected randomly from the above group, find the probability of being a student who received more than six marks.
- 02) a) In a certain month, a man expends 72% of his income for food, 13% for travelling expenses and rest of the income for other expenses.
- i) Find the percentage of other expenses.
 - ii) Find the monthly income of the man, if the amount of the money spent for the other expenses is Rs. 1200 more than the amount spent for travelling expenses.
- b) $A = \{\text{Square numbers between 0 and 10}\}$
- i) Represent the set A in another two methods.
 - ii) Find $n(A)$.
 - iii) Write an example for a “null set”.

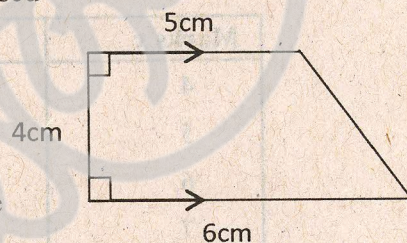
03) a) Out of the sets of lengths given below, choose and write the sets of measurements that can be used to construct a triangle. All measurements are in centimeters. Give reasons for your answers.

- (i) (4, 6, 8) (ii) (5, 8, 13)
(iii) (8, 10, 12) (iv) (5, 8, 14)

- b) (i) Using a straight edge and a pair of compasses only and showing the construction lines clearly, construct the triangle ABC in which $AB = 7\text{cm}$, $BC = 8\text{cm}$ and $AC = 6\text{cm}$.
(ii) Measure and write the magnitude of \hat{ABC} .
(iii) Draw the locus of a point moving equidistant to AB and passes through the point C, using a set square and a straight edge.

04) A scale diagram of a piece of land drawn to the scale, "4m in 1cm" is given below.

- (i) Write the name of the geometrical shape can be used for the scale diagram.
(ii) Express the scale used to draw the scale diagram as a ratio.
(iii) Find the area of the scale diagram by dividing the diagram in to suitable parts.
(iv) Find the actual area of the land.
(v) The length of a rectangular land which is equal in area to the above land is 32cm. Find its breadth.



- 05) a) (i) Draw a Cartesian plane, marking the two axes and from -2 to +5.
(ii) Plot the points $A=(1,2)$, $B=(3,2)$, $C=(5,0)$, $D=(2,-2)$ and $E=(-1,0)$ on the above Cartesian plane and join these points respectively to obtain a closed plane figure.
(iii) Draw the axis of symmetry of the figure obtained in above (ii).
(iv) Write the equation of the axis of symmetry.

b) Represent the inequality $-2 < x \leq 3$ in a number line.

06) a) When preparing a certain jewellery copper and gold are mixtured in the ratio 1:10 and gold and silver are mixtured in the ratio 5:2.

- (i) Find the ratio between copper, gold and silver.
(ii) Find the mass of gold contains, if the mass of this jewellery is 600mg.
b) (i) Express 1m^3 in litres.
(ii) The length, breadth and height of a cuboid shaped water tank, are 50cm, 40cm, and 30cm respectively. Find the volume of water needed to fill the tank in litres.