PROVINCIAL DEPARTMENT OF EDUCATION NORTH WESTERN PROVINCE

THIRD TERM TEST - 2018

MATHEMATICS - I

Grade 08 **Two Hours**

Name / Index No. :

PART - I

- **Answer question number 01 to 20 on this paper itself. Correct answer for each question carries 02 marks.**

01. Following is a number pattern. Write its second and third terms.
7, ..., ..., 16, 19, 22, ...

02. The direction of P an seen from A is given as "S 45^0 W".
Represent it on a sketch diagram.

A•

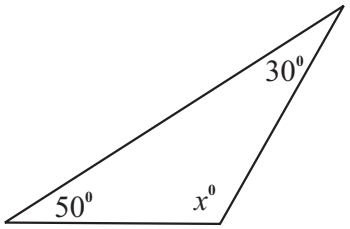
03. Solve, **5m - 2 = 18**

04. Find the value of, **(-8) - (-2)**

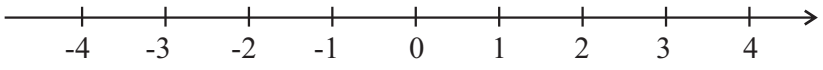
05. Simplify, **3a - 2b - a + 3b - 2**

06. Number of coconuts plucked from each tree is given below.
8, 10, 3, 8, 4, 10, 12, 11, 11, 8 find the median.

07. Find the value of x,



08. Represent $x < +2$ on the number line.

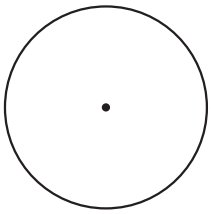


09. Find the value of using prime factors $\sqrt{144}$

10. Write 20% as a fraction and express it in the simplest form.

11. Simplify, $3 \quad \frac{1}{3}$

12. Dar a minor sector on the given circle and shade it.

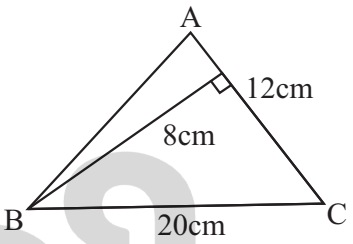


13. Given below are the sets of lengths chosen to draw a triangle. Underline the set which could be used to draw the triangle.

(i) 6cm, 5cm, 12cm (ii) 6cm, 6cm, 10cm (iii) 4cm, 6cm, 10cm

14. Write $36a^2$, as a power of a product

15. Find the area of the triangle ABC.



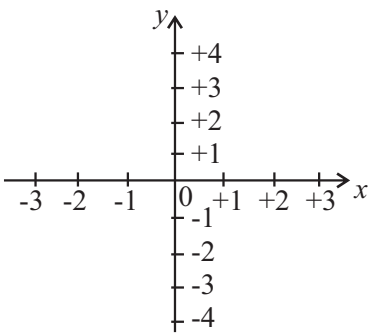
16. If a cuboid shape of vessel having length 20cm, breadth 5cm and height 8cm is filled and then pour it to a vessel of 1 l find the volume of empty space of it in cubic centimeters.

17. A container has 5 red pens, 3 blue pens and rest are black of same type. If the probability of taking $\frac{5}{12}$ a red pen out from that containers is find the number of black pens in it.

18. If the distance between two places of a scale diagram drawn to the scale 1:50000 is 12cm. Find the actual distance.

19. Sri Lanka belongs to time zone. At what time, Sri Lanka can watch the start of the cricket match, which starts at 9.00 a.m. in Kenya, which belongs to the +3 time zone.

20. Draw the line y = +2 on the given Cartesian plane.



Grade 08 **PART - II** **MATHEMATICS**

- **Answer to the first question and 04 other questions.**

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

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01. (a) Answer the following questions by resuming all activities you had done in the following lessons.

(i) Draw a circle of any size, mark two points on it and name them as A and B. (02m.)

(ii) Give a name for the part of the circle between A and B. (01m.)

(iii) Join A and B with a straight line. What is the name use for that straight line AB? (01m.)

(b) Fill in the blanks.

(i) The longest chord of a circle is named as its ..... (01m.)

(ii) The straight line segment joining the center of a circle to any point on the circle is called a ..... (01m.)

(iii) In a circle, a region bounded by two radii and an ..... is called a ..... (02m.)

(iv) A region of a circle bounded by a ..... and an ..... is called a segment of the circle. (02m.)

(c) Following table shows the results obtained by taking a card randomly from a pack of cards numbered from 1 to 6.

number	1	2	3	4	5	6
tally marks	𝍸 /	𝍸		////		𝍸
number of occurrences	06	05	07		08	

(i) Copy the table to your answer sheet and fill the blanks. (02m.)

(ii) What is the fraction of success of getting the card with number 2? (02m.)

(iii) Which number of card has the highest fraction of success? (02m.)

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02. Following values show the number of liters of drinking water, bought by 10 customers from water purifying center.

15 32 16 18 09 25 30 26 27 25

(i) What is the mode? (01m.)

(ii) Find the median of above data. (02m.)

(iii) Calculate the mean amount of water bought by a person. (03m.)

(iv) Copy the following stem and leaf diagram on your answer sheet and enter the above data on it. (03m.)

Steam	Leaf
0	
1	
2	
3	

(v) Another person has bought 35 liters of water and it is not included in above data. Find the range of the data after including 35 liters to the data set. (02m.)

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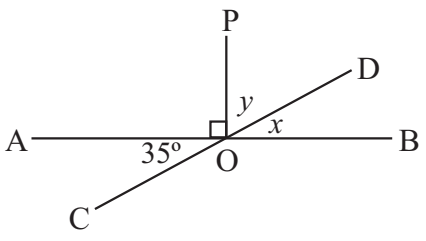
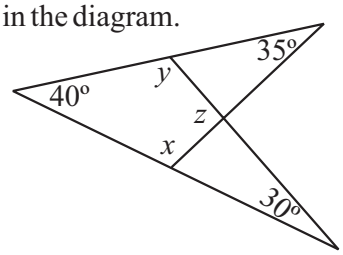
03. (a) Straight lines AB and CD intersect at O. PO is the perpendicular drawn to O.

(i) By giving reasons find the value of x. (02m.)

(ii) Find the value of y. (02m.)



(b) Answer the following questions considering the information marked in the diagram.



(i) By giving reasons find the value of x. (02m.)

(ii) Find the value of y. (02m.)

(iii) By giving reasons find the value of Z. (03m.)

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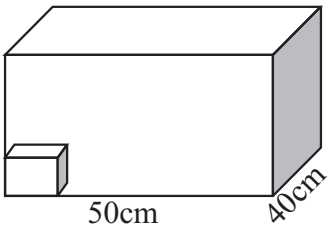
04. Following is a cuboid shaped box with base length of it is 50cm and breadth of it is 40cm. It is proposed to pack with cubical shaped small boxes having sides of 10cm.



(i) Calculate the volume of a cubical shaped box. (02m.)

(ii) Calculate the number of boxed that could be packed on the base of the cuboid. (02m.)

(iii) If 6 layers of drug boxes are loaded, such that the volume of cuboid is totally occupied, find the height of the cuboid. (02m.)

(iv) Find the volume of cuboid. (03m.)

(v) Find the capacity of a vessel having the volume same as a the cuboid. (02m.)

---

05. (a) (i) Draw a number line and represent +3, 1.5 on it. (02m.)

(ii) Arrange above group of numbers in ascending order using answer for (i). (01m.)

(b) (i) Draw a cartesian plane having its and axis from -5 to +5. (02m.)

(ii) A (-3, 2), B (2, 2), C (2, -3), D (-3, -3)(03m.)

(iii) Write the Y coordinate of the point C. (01m.)

(iv) Join the above points to gain a closed figure. (01m.)

(v) AB find equation. (01m.)

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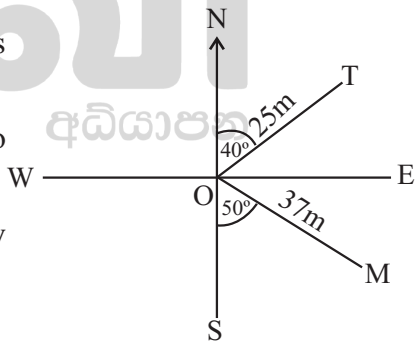
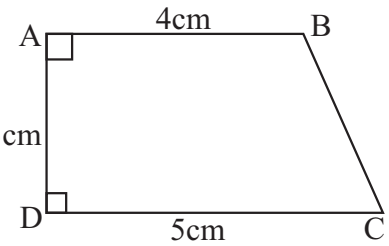
06. (a) Following is a rough sketch showing locations T and M as seen from O. T is located 25m away in the direction N 70 E.



(i) Write the direction of M as seen from O according to above notation. (02m.)

(ii) If L is located in the direction of N W and 40m away from O, show it using a rough sketch. (03m.)

(b) Following is a sketch of a floor plant of a building.



(i) If 1cm represents 1m write that scale as a ratio. (02m.)

(ii) Draw the rough sketch of above figure. (02m.)

(iii) According to the scale drawing, find the true length of BC. (02m.)

---

07. (a) (i) Construct the straight line segment AB = 6.4cm. (02m.)

(ii) Construct the triangle ABC where, AC = 5cm ç BC = 5.5cm. (03m.)

(iii) Measure and write the magnitude of angle ABC. (01m.)

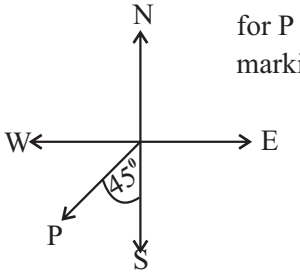
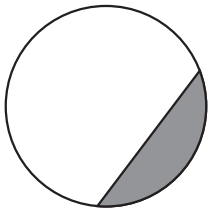
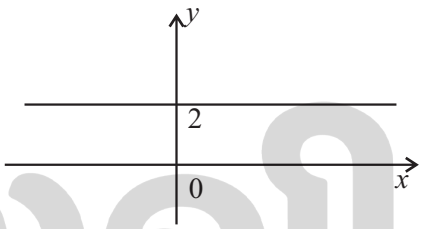
(b) Simplify,

(i) $3(y+1)-(y-2)$ (03m.)

(ii) $x=3,\ y=-1,\ 5x+y$ find the value. (02m.)

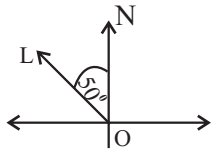
ANSWER PAPER

PART - I

01.	10, 13	1+1	02
02.	 for P marking 45^0	01 01	02
03.	5m = 20 m = 4	01 01	02
04.	-6 -8 + 2 1		02
05.	2a + b - 2		02
06.	5.5 ..... $\frac{8+10}{2} = 9$	01 01	02
07.	$x = 100^0$ $(x + 30 + 50 = 180^0)$ - 1		02
08.		1+1	02
09.	$2^2 \times 2^2 \times 3^2$ 2 x 2 x 3 = 12	01 01	02
10.	1 : 5 (20 : 100 1)		02
11.	$3 \times \frac{3}{1}$ 9	01 01	02
12.			02
13.	6cm, 6cm, 10cm		02
14.	$(6a)^2$ $(6^2a^2 \rightarrow 1)$	01 01	02
15.	$\frac{1}{2}$ x 12cm x 8cm $48cm^2$	01 01	02
16.	Volume of the cuboid = $800cm^3$ $1l$ - $800cm^3$ $200cm^3$	01 01	02
17.	Number of black pens = 4		02
18.	1 : 5000 12cm : 5000 x 12cm 12cm 60000cm 600m		02
19.	11.30 a.m.		02
20.			02
			40

PART - II

01.	(a) (i) Marking the point A Marking the point B	01 01	02
	(ii) Arc Major arc Minor arc Semi		01
	(iii) Chord		01
	(b) (i) Diameter		01
	(ii) Radill	01	
	(iii) Arc	01	02
	Sector	01	
	(iv) Chord	01	02
	Arc		
	(c) (i) $\not{N}$ // , $\not{N}$ ///		02
	04 , 05		
	(ii) $\frac{5}{35}$		02
	(iii) 5		02
			16

02.	(a) (i) 25		01
	(ii) For ascending order	01	
	25	01	02
	(iii) Sum 223	01	
	$\frac{223}{10}$	01	
	22.3*l*	01	03
	(iv) For the correct diagram (2 marks if the leaves are not in ascending order)		03
	(v) 35 - 9	01	
	26	01	02
			11
03.	(a) (i) 35^0	01	
	Vertically opposite angels	01	02
	(ii) $y = 90 - 35$	01	
	$= 55^0$	01	02
	(b) (i) $x = 180 - 40 - 35$	01	
	$= 180 - 75$		
	$= 105^0$	01	
			02
	(ii) $y = 180 - 40 - 35$	01	
	$= 180 - 70$		
	$= 110^0$	01	02
	(iii) $z = 360 - 105 - 110 - 40$	01	
	$= 360 - 255$		03
	$= 105^0$	01	
	Sum of the angles of a quadrilateral is 360^0	01	
			11
04.	(a) (i) 10 x 10 x 10		
	or		
	10^3	01	
	$1000cm^3$	01	02
	(ii) 5 x 4	01	
	20	01	02
	(iii) 10 x 6	01	
	60cm	01	02
	(iv) 50 x 40 x 60	02	
	$120\,000cm^3$	01	03
	(Give marks for alternatives)		
	(v) 120 000 1000	01	
	120*l*	01	02
			11
05.	(a) (i) If 2 numbers marked correctly	01	
	If all 3 numbers marked correctly	01	02
	(ii) $-1\frac{1}{2}$, 1.5 , 3		01
	(b) (i) For the Cartician plane		02
	(ii) 1 mark for each point		03
	(iii) -3		01
	(iv) For the rectangle		01
	(v) $y = 2$		01
			11
06.	(a) (i) (S 50^0 E)		02
	(ii) 		
	Drawing OL		
	Marking the angle	01	
	Marking the distance	01	
		01	03

	(b) (i) 1cm 100cm	01	
	1 : 100	01	02
	(ii) For a correct scale diagram		02
	(iii) Obtaining the length		02
			11
07.	(a) (i) Drawing AB		02
	(ii) For C	01	
	BC	01	
	AC	01	03
	(iii) For the measurement of angle B		01
	(b) (i) $3y + 3$	01	
	$-y + 2$	01	
	$2y + 5$	01	03
	(ii) $5(3) + (-1)$		
	$15 - 1$	01	
	14	01	02
			11

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