



PROVINCIAL DEPARTMENT OF EDUCATION - NORTH WESTERN PROVINCE

## Second Term Test 2018

Grade 8

## MATHEMATICS

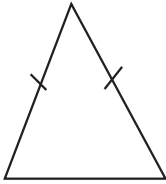
Time : 02 hours

Name / Index No. \_\_\_\_\_

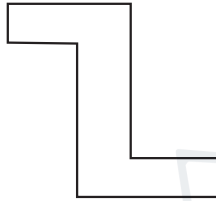
- Answer 1st 20 questions on this paper itself.  
Correct answer for each question carries two marks. (02 x 20 = 40)

## Part I

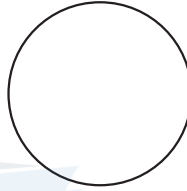
01. From the following underline the figures with bilateral symmetry.



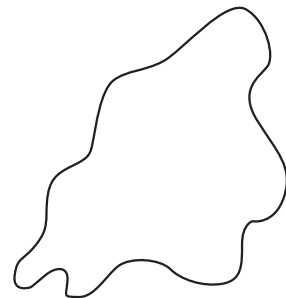
(a)



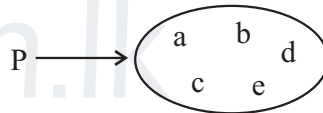
(b)



(c)



(d)

02. Calculate,  $\frac{3}{8} + \frac{5}{24}$ 03. According to the given Venn diagram find  $n(P)$ .04. Write the reciprocal of,  $\frac{5}{8}$ 05. Calculate,  $5.6 \times 3.3$ 

06. Calculate,

t	Kg
3	750
+ 5	922
<hr/>	
<hr/>	

07. Write the number of edges and vertices in a regular octahedron,

08. Calculate,  $3\frac{1}{5} \times 5\frac{5}{8}$

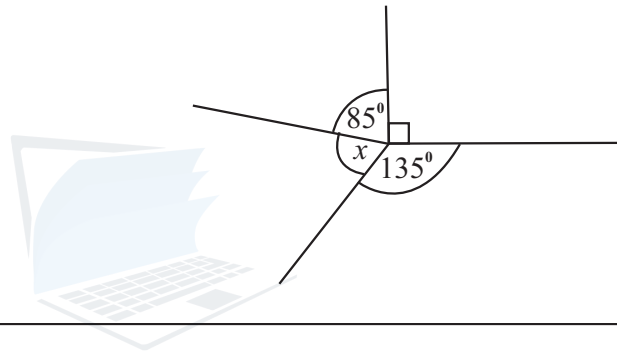
09. If,  $625 \div 25 = 25$  find the value of  $625 \div 0.25$

10. If, the ratio between A and B is 3 : 4 and the ratio between B and C is 5 : 2, find the ratio in A, B and C.

11. Find the value of,  $\sqrt{324}$

12. Simplify,  $(-5) - (-7)$

13. Find the value of  $x$ .



14. Find the value of,  $15 \times 2.8$

15. Express  $(a \times b)^3$  as a product of powers.

16. Factorize  $15a + 18b$

17. Write  $8a + 4ab - 4ac$  as a product of two factors.

18. Find the value of,  $(-1)^5$

19. If  $P = \{\text{Quadrilaterals}\}$ , write 4 elements of P.

20. Amitha, Sunetha and Dilupa are friends. The ratio of their weights is 6 : 4 : 5. If Sunetha's weight is 40kg. Find the weight of Dilupa.



04. (a) Solve following equations,

(i)  $\frac{x}{2} = 35$  (02 marks) (ii)  $3y + 2 = 11$  (02 marks)

(iii)  $4 \left( \frac{y}{2} - 2 \right) = 20$  (03 marks)

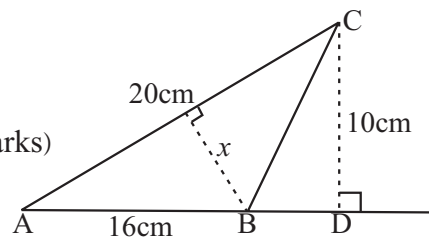
(b) Nimal has Rs.  $x$ . Sunil has Rs. 100 more than three times of the amount of Nimal.

(i) Write a suitable algebraic expression to represent the amount of money Sunil has. (01 mark)

(ii) If the amount of money Sunil has is Rs. 850, Calculate the amount of money that Nimal has. (03 marks)

05. (a) (i) Calculate the area of the triangle ABC according to the given diagram. (03 marks)

(ii) Find the length denoted by  $x$  in the diagram. (03 marks)

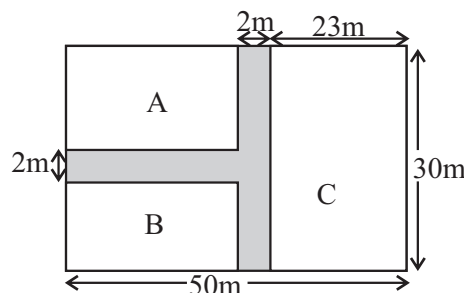


(b) The following diagram shows a sketch of a rectangular piece of land.

(i) Calculate the area of the land. (02 marks)

(ii) Shaded areas in the diagram are the roads reserved for the lots A, B and C. Calculate the total area reserved for roads. (02 marks)

(iii) Find the remaining area of the land, after reserving for roads. (03 marks)



06. (a) (i) Write 32% as a fraction in the simplest form. (02 marks)

(ii) Write the ratio 12 : 25 as a percentage. (02 marks)

(iii) Out of the number of fruits in a bag, 20% is Guava. If the total weight of this bag is 2kg calculate the weight of Guava in it. (03 marks)

(b) At the beginning, there were 200 workers in a sugar factory 40% of them were female. After 2 months, 15 female workers went abroad. Male workers were joined instead of them.

(i) What is the number of male workers at the beginning. (02 marks)

(ii) Find the difference the number of male and female workers after two months. (02 marks)

07. (a) Copy of following table and fill the blanks.

Plane figure	Number of axes of bilateral symmetry	Order of rotational symmetry
Equilateral triangle	3	.....
Parallelogram	.....	2
Rhombus	.....	.....
Regular hexagon	5	.....

(b)  $X = \{\text{the letters in the word ANURADHAPURA}\}$  (05 marks)

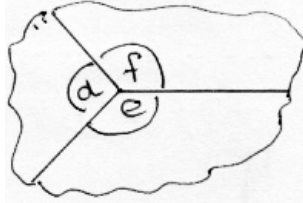
(i) Write the elements of the set using set notation. (02 marks)

(ii) If A is a null set, write an example for A. (02 marks)

(iii) Write the set A using symbols. (02 marks)

Answer Sheet

Part I

01.	a and c 1 mark for each answer	01	02	17.	$8a + 4ab - 4ac$ $= 4a(2 + b - c)$		02
02.	$\frac{3}{8} + \frac{5}{24}$ $\frac{9}{24} + \frac{5}{24}$ $= \frac{14}{24}$ $= \frac{7}{12}$	01	02	18.	-1		02
03.	$n(P) = 5$		02	19.	Square, parallelogram, trapezium rectangle, rhombus four from this 1 for two correct answers		02
04.	$\frac{8}{5}$		02	20.	Amitha : Suneetha : Dilupa $6 : 4 : 5$ $\downarrow$ $\frac{4}{15}$ $\frac{4}{15} = 40\text{kg}$	01	
05.	$5.6 \times 3.3$ $= 18.48$		02		$\frac{40}{4} \times 5 = 50\text{kg}$	01	02
06.	9t 672kg		02				<u>40</u>
07.	Edges = 12 Vertices = 6	01	02	<b>Part II</b>			
08.	$3\frac{1}{5} \times 5\frac{5}{8}$ $\frac{16}{5} \times \frac{45}{8}$ $2\frac{16}{5} \times \frac{45}{8}$ $1\frac{16}{5} \times \frac{45}{8}$ $= 18$	01	02	01.	(a) (i) a, b, c for 3 correct answers for 2 correct answers	02 01	02
09.	2500		02		(ii) d, e, f for 3 correct answers for 2 correct answers	02 01	02
10.	15 : 20 : 8		02		(iii) 		02
11.	$\sqrt{324} = 2\overline{)324}$ $2\overline{)162}$ 2 x 3 x 3 $3\overline{)81}$ = 18 $3\overline{)27}$ $3\overline{)9}$ $3\overline{)3}$ 1 Divide by prime numbers 2 x 3 x 3 = 18	01	02		(iv) (a) $180^\circ$ $360^\circ$ (b) $360^\circ$ $360^\circ$	01 01 01	04
12.	$(-5) - (-7)$ $-5 + 7$ $= +2$	01	02		(b) $a = 117^\circ$ $b = 63^\circ$ $c = 57^\circ$	02 02 02	<u>06</u>
13.	$85^\circ + 90^\circ + 135^\circ = 310^\circ$ $x = 360^\circ - 310^\circ = 50^\circ$	01	02				<u>16</u>
14.	42 or 42.0		02	02.	(a) (i) $\frac{4}{10}$ or $\frac{6}{15}$ or $\frac{8}{20}$ for suitable answer		01
15.	$a^3 \times b^3$		02		(ii) $\frac{24}{7}$		01
16.	$15a + 18b$ $= 3(5a + 6b)$	1+1	02		(b) (i) $\frac{3}{8} \times \frac{5}{12}$		



