PROVINCIAL EDUCATION DEPARTMENT

NORTHERN PROVINCE

PLACEMENT EXAMINATION – 2021

GRADE 8 **MATHEMATICS** **TWO HOURS**

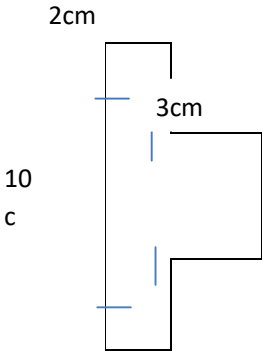
❖ Answer the all questions

Part I

1. Write the general term of 3,6,9,12,…

……

2. Find the perimeter of this figure



……

3. Convert 2t5kg into metric tons

……

4. Fill in the blank cage -3 × ☐ × (+3) = (-27)

5. Simplify: $3\frac{3}{8} \div \frac{3}{4}$

……

……

6. Show that $(5x)^2 \times (2x)^3 = 200x^5$

……

……

7. Find the value of $\sqrt{625}$

……

8. Simplify: x(4x-3) +4(x-2)

……

9. Write 252 as a product of prime factors

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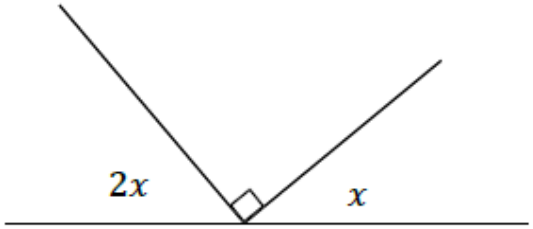
10. Find the H.C.F of 8a, 12ab, 18ac

……

11. Find the value of ‘x’

……



12. Write the index form of 343

13. Find the value of 3.636 ÷0.9

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…

14. Write the Euler’s relation formula

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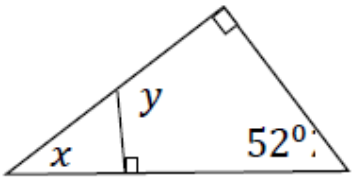

15. According the information given in the figure, find the values of x and y.

……

16. How many axes of symmetry and order of rotational symmetry of rhombus

……

17. Simplify: $1\frac{2}{3} \div \frac{1}{2}$

……

18. If Rs 2800 divided among Nimal and Kamal with the ratio 3:4, find the amount that Nimal receives.

……

19. Write in ascending order (10.55, $\frac{1}{2}$, 10.6 , $\frac{1}{20}$)

……

20. A part of figure and an axes of symmetry are given, complete the symmetrical figure, and draw other axes of symmetry

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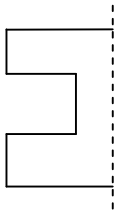


Part II

1) 

I. What is the kind of number which is represented in this number pattern?
……..

II. Complete the above pattern in order to get the 5thTriangular number
……

III. If 1764= 2x2x3x3x7x7, find the value of $\sqrt{1764}$
……

IV. The area of a square is 196 cm^2, find the length of a side
……

V. Find the perimeter of the above square
……

2)

I. The length of a rectangular flower bed is (2x-1)metres and the width is (x+2) metres. Find the perimeter of this flower bed in terms of x
……

II. If x=3, Find the perimeter of the above flower bed
……

III. Simplify: 9x+6y+3x-y
……
……

IV. Find the value of $\frac{(+2)\times(+8)}{(-4)}$
……
……

V. Fill in the blanks and get the answer
(-5) – (-3)
(-5) + (…..)
(…..)

3) Simplify

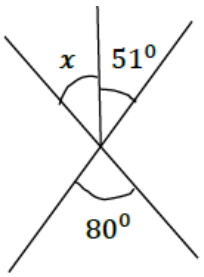
I. $2\frac{1}{4} + 1\frac{1}{3} - 2\frac{1}{6}$

II. $4\times 1\frac{2}{7}$ III. $1\frac{2}{3}\times\frac{2}{5}$

III. $3\frac{3}{4}\div 5$ V. $3\frac{1}{8}\times 2\frac{1}{2}$

4)

I. In the figure find the value of x



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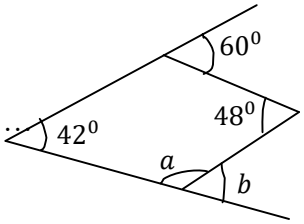
II.

a) Find the value of 'a and b'



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b) Find a pair of complementary angles in this diagram

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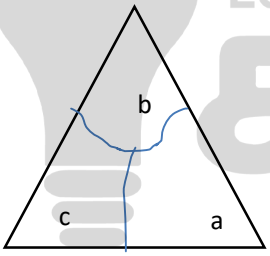
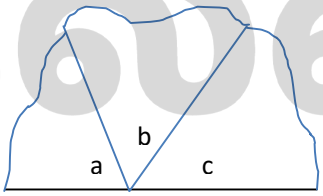
III. The following picture shows an activity done by a student .Write the conclusion he can come





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IV. Draw all exterior angles of a quadrilateral and How much is the addition of the exterior angles of a quadrilateral

……

5)

I. Write $\frac{3}{4}$ as a decimal

……..

II. Find the value of

a) 0.032+4.01−0.07

……

b) 1.4×10

……

c) 1.4÷100

……

III. If 43×15 = 645 , Find the value of 4.3×1.5

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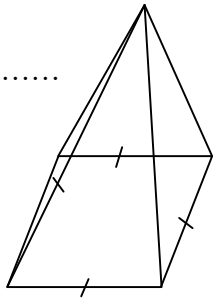
IV. Simplify $(x^2)^3 \div (x^3)^2$

……

6)

a) I) Write the name of this solid



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II) When two such solids are fixed together with their square shaped surfaces, which name can be given to that new solid

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III) How many faces, edges and vertices are there in this object? Verifythe Euler's relation

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b) I) The carts A,B and C were loaded with rice weighing 2t90kg,3t105kg and 4t85kg respectively. Calculate the total weights of rice that was loaded into the three carts

……

II) 3t250kg of cement that were in a lorry was transferred equally into 5 vans .How many cement bags was transferred into each van (1 cement bag=50kg)

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