PRITHWI SECONDARY BOARDING SCHOOL
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ANNUAL EXAMINATION - 2077

Grade: VIII **Full Marks: 50**
Subject: Compulsory Mathematics **Pass Marks: 20**
Time: 1 hour 30 minutes

Group A [20 x 1 = 20]

1. Select the correct answer:

a) {21} is known as:

i) null set ii) singleton set iii) power set

b) If A = {0, 1, 2, 3}, which subset either B = {1, 2, 3, 4} or C= {0, 1, 2, 3, 4} is the proper subset of A?

i) B ii) C iii) both B and C

c) If X = {2, 3, 4}, how many subsets can be formed by X?

i) 3 ii) 7 iii) 8

d) What is the ratio of 25 and 55?

i) 5:7 ii) 5:11 iii) 5:25

e) If Amount (A), Rate (R) and Time (T) are given what is the formula to calculate the principal (P)

i) $P=\frac{A\times 100}{TR+100}$ ii) $P=\frac{100+A}{100\times TR}$ iii) $P=\frac{100TR}{A+100}$

f) What is the value of 40% of Rs. 6000

i) Rs. 4200 ii) Rs. 2400 iii) Rs. 24000

g) What is the simplest form of the surd $\sqrt{72}$?

i) $6\sqrt{2}$ ii) $4\sqrt{3}$ iii) $2\sqrt{5}$

h) After simplifying $\sqrt{18}+\sqrt{8}$, we get:

i) $2\sqrt{3}$ ii) $3\sqrt{2}$ iii) $5\sqrt{2}$

i) What is the scientific notation of 6290000000.

i) 6.29×10^{7} ii) 629×10^{9} iii) 6.29×10^{-9}

j) What is the valve of x when $\frac{x}{3}=\frac{5}{15}$

i) 1 ii) 2 iii) 3

k) What will be the cost of a paint, if 15% discount will be given of Rs. 320?

i) Rs.45 ii) Rs. 48 iii) Rs.50

l) What is the range of following data.

66, 98, 87, 43, 78, 82, 47, 92.

i) 55 ii) 65 iii) 75

m) What is the compass bearing of SE.

i) 045^o ii) 090^o iii) 135^o

n) What is the value of x, when $4(x - 3) = 8$?

i) 5 ii) 11 iii) 15

o) In $\frac{x^2}{27} = \frac{1}{3}$, the value of x is:

i) 3 ii) -3 iii) ± 3

p) If x = 2 and y = 0, what is the value of x^y.

i) 0 ii) 1 iii) 2

q) The image of the point A (4, 1) under the reflection about X- axis.

i) (4, -1) ii) (-4, 1) iii) (-4, -1)

r) What is the circumference of a circle having diameter 7cm.

i) 44cm ii) 22cm iii) 11cm

s) The HCF of $2x - 4$ and $x^2 - 4$ is:

i) $x - 2$ ii) $x+2$ iii) $x - 4$

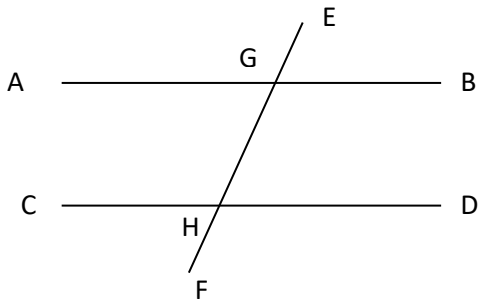
t) The perimeter of a squared handkerchief is 1m; what its length of side?

i) 25m ii) 25cm iii) 4m

Group B [10 * 1= 10]

2. Fill in the blanks:

a)



The corresponding angle of $\angle EGB$ in the given figure is ……..

b) If x be an acute angle of a right-angled isosceles triangle, then the value of x is ……..

c) If two opposite interior angles of an exterior angle of a triangle are 50^o and 70^o then the size of the exterior angle is ……

d) If a^o and 120^o are pairs of corresponding angles, then a^o is equal to ……

e) If an angle of a parallelogram is 90^o, it becomes a …….

f) If x^o represents an angle of a rectangle then x^o is equal to ……..

g) If b^o is the angle formed by the intersection of the diagonals of a square then b^o is equal to …….

h) Each interior angle of a regular polygon with n number of sides is obtained by the formula ……..

i) The corresponding sides of similar triangles are always ……..

j) The line joining the vertex and the middle point of the base of an isosceles triangle is ……. to the base.

Group C [5 * 4 = 20]

3) Out of 42 players 28 players like football, 22 like basketball and 12 like both games,

i) How many players like at least one of the games.

ii) How many players like neither of the games.

iii) Present the above information in Venn – diagram.

4) Simplify: $\frac{a^2 - x^2}{a + b} \times \frac{a^2 - b^2}{ax + x^2} \div \frac{a - x}{x^2}$

5) Simplify: $7.89 \times 10^4 - 6.43 \times 10^3$

6) If the distance between (2,3) and (8, K) is 10, find the value of K.

7) The marks obtained by 40 students are given below. Find the arithmetic mean.

Marks	10	15	20	25	30
No. of students	6	8	12	8	6

Best Wishes!!!