The City School

North Nazimabad Boys Campus

**Topic: Mixed Concept (Paper I)**

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**Subject: Mathematics**

Q1: Arrange 1.74, 1.56, 173% and 1 ¾ in descending order.

Q2:Evaluate.:

1. 3+5(3-1.4)
2. 0.2 x 0.07
3. 3 2/3 – 2 4/5

Q3: The perimeter of a rectangle is given by P=2(B+L),

Find L when B = 6 cm and P = 42 cm.

Make B as the subject of the formula

Q4: Solve the following equations by factorization.

a. *x*2-15*x -*54=0 b.2*x*2-7*x*-9=0

c. *x*2-12*x+*32=0 d.2*x*2+13*x* +6=0

Q5: A caption on a certain brand of goats milk reads:

NUTRITION FACTS

Carbohydrates 36g

Proteins 27g

Fats 30g

Express this information as a ratio of proteins to fats to carbohydrates, in its simplest form.

Q6: A student took 18min to walk from home to school.

1. Given that he arrived school at 07:05, find the time at which he left home
2. Convert 4km/hr to m/sec.

Q7: The table below shows the number of a popular magazine sold to customer in different shops in the month of April

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Number of magazine sold | 70-74 | 75-79 | 80-84 | 85-89 | 90-94 | 95-99 | 100-104 |
| Frequency | 4 | 11 | 15 | 24 | 18 | 9 | 3 |

Estimate the mean of the distribution.

Q8:In the given set of numbers 3, 8, 9, 12, 12, 15, 12, 13, 10 find

1. Mode
2. Mean

Q9: Two similar prisms have volumes of 27cm3 and 64cm3, find

1. The ratio of their heights,
2. The ratio of their surface area.

Q10: The table below shows the height of 65 plants.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Height of plants | 0 ≤ h ≤ 20 | 20 ≤ h ≤ 30 | 30 ≤ h ≤40 | 40 ≤ h ≤ 60 | 60 ≤ h ≤ 100 |
| Frequency | 8 | 20 | 15 | 12 | 10 |

Draw the histogram of this distribution.

Q11: Solve the equation (2*x* – 4)(3*x*+1)=0