Std: VI

Date: 18/2/16

Marks: (80)

Time : 1 ½ hrs.

Q.1a. If $a = 1$, $b = -2$, $c = 3$ find $a^3 + b^3 + c^3 - 3abc$ (3)

b. The average daily rainfall of certain town is **5.5cm** in the month of June calculate the total rainfall in a given month (3)

c. Find simple interest and amount on Rs.1600 for 4yrs 3mths at $2\frac{1}{2}\%pa$ (4)

Q.2a. In the adjoining figure find the value of a, b, c. (3)
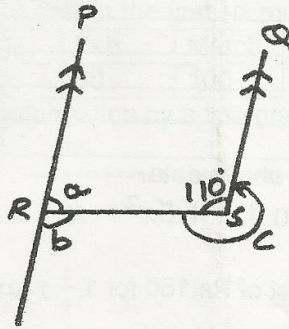
b. Subtract $2x^2 - 5x + 1$ from the sum of $3x^2 - 2x \ and \ 3x + 5$ (3)

c. Find the angle of a triangle which are in the ratio **1:2:1** and identify the type of triangle. (4)

Q.3a Read the given bar graph and answer the following questions. (3)
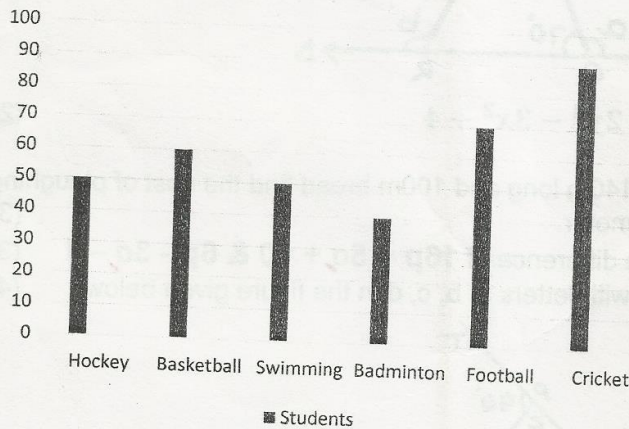
■ Students

1. Find the total number of students playing all the sports
2. How many more students are playing cricket than football.
3. How many students are interested in swimming and basketball?

b. If **a = -2, b = 1, c = 3**, find the value of $2ab^2 - 3a^2b + 5c$ (3)

c. The dimension of a metallic box are 25cm, 15cm, and 45cm.find the volume of 16 such metallic boxes. (2)

d. Simplify: $2x^3 + 3x^2 + 2x - 4 - x^3 - 2x^2 + 3x - 2 - 4x^3 + x^2 - 4x + 3$ (2)

Q.4a In how many years will Rs.8000.amount to Rs.10000 at 5% pa? (3)

b. The volume of a cuboidal box is $0.06m^3$. If its height and breadth are 50cm and 30cm respectively. Find its length. (3)

c. Find the value of $\frac{5}{9}F - 32$ if $F = 45$ (2)

d. Construct an equilateral triangle whose one side is 4.5cm. (2)

Q.5a A box is 60cm long, 45cm wide, & 34cm high. How many soaps measuring 10 cm × 5 cm x 6cm can be fitted in it? (4)

b. The monthly income of a person is Rs.18000 His expenditure on various items per month is as follows. (4)

| Item	Money spent in Rs.
Food	5000
Conveyance	3000
Electricity	3000
Saving	7000

Draw a pie chart to represent the above data.

c. Subtract $x^3 + 2x^2 + 5x + 4$ from $3x^3 + 5x^2 - x + 3$ (2)

Q.6a What principal will yield an interest of Rs.160 for $1\frac{1}{4}$ $years$, the rate given is $3\frac{1}{3}$ % pa. Also find the amount to be paid at the end of the given time. (4)

b. In the adjoining figure find the values of the unknown angles. (4)
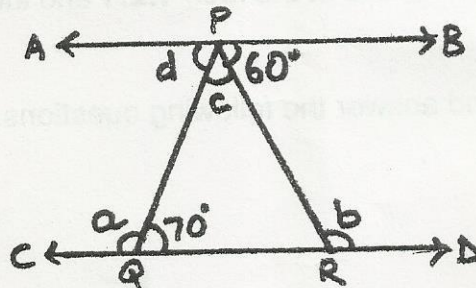
c. If $x = 1$ & $y = 2$ $find$ $2y^3 - 3x^2 + 4$ (2)

Q.7a A rectangular garden is 140m long and 100m broad find the cost of ploughing it at Rs.1.50 per square meter. (3)

b. Add $8p + 3q + q$ to the difference of $16p + 5q + 10$ & $6p - 3q - 1$ (3)

c. Find the angles marked with letters a, b, c, d in the figure given below. (4)
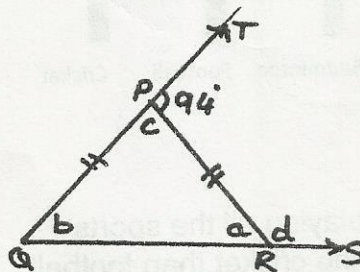
Q.8a Find the simple interest and amount on Rs.1500 for 32 months at $2\frac{1}{5}\%$ (4)

b.   In the adjoining figure find the value of the marked angle. (3)
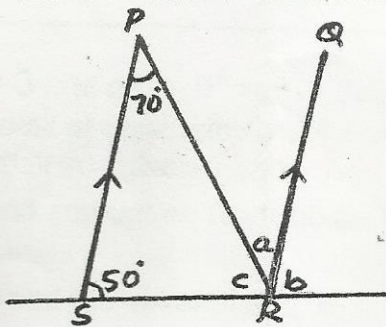
c.   A shopkeeper sold ratio sets in the first six months of the year as follows.

Months	Jan	Feb	March	April	May	June
No.of radio sets	110	80	100	90	150	140

Represent the above information by a line graph (3)

****