**Model Question First Term - 2081**

**Class : 7 F.M. 50**

**Time : 2Hrs Sub: Com. Mathematic P.M.20**

**Attempt all the questions.**

1. If A = {prime number less than 10}, B = {odd number less than 10}, C {even number less than 10} are given set;

a) List the element of set A, B and C. [1]

b) Which of the above set are equivalent set? [1]

c) Define overlapping set. [1]

2. The ratio of boys and girls in a school is 1:2. If the total number of student in a school is 600;

a) Find the total number of boys. [1]

b) Find the total number of girls. [1]

c) If 6, x, 24 and 36 are in proportion; find the value of x. [2]

3. a) 10 workers can complete a piece of work in 18 days. How many workers are

required to complete the work in 12 days? [3]

b) The cost of 8kg of orange is Rs. 720, what is the cost of 6kg of orange? [2]

c) Divide Rs. 65 in the ratio of 2:3. [2]

4. There are 40 student in a class and 16 of them are girls;

a) Find the ratio of girls and total number of student. [1]

b) Find the ratio of boys and total number of student. [1]

c) Find the ration of girls and boys. [1]

5. Chandrakala has square garden of length 18m;

a) Find its perimeter. [2]

b) Find the length of wire required to fence it with 4 rounds. [2]

c) If the rate of cost of fencing is Rs. 25 per meter, find the total cost of fencing. [1]

6. a) Evaluate: 41/2 [1]

b) Simplify: (xp-q)r (xq-r)p (xr-p)q [2]

c) The length and breadth of rectangle is (x+2)m and (x+3)m respectively. Find the area of rectangle. [2]

7. a) If a+b = 3 and ab = 2, find the value of a2+b2. [2]

b) If a = 4x3y2, b = 3x2y3 and c = 6xy, find the value of . [2]

8. a) What is binomial expression? [1]

b) Subtract: 2x2y from 9x2y. [1]

9. a) What is the sum of adjacent angle in a straight line? [1]

b) A pair of supplementary angle are in the ratio of 2:3. Find them. [2]

c) Find the value of unknown angle. [3]

c0

b0

400

a0

10. a) Write the complement and supplement of 750. [2]

b) Define right angle. [1]

11. a) Find the sizes of unknown angle. [3]

880

1400

y0

z0

z0

1280

b) Construct an angle 600 and 900 with the help of compasses. [2]

12. The marks obtain by Rajesh in first terminal exam are given below;

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Subject | Math | Science | Nepali | English | Social |
| Marks | 45 | 40 | 35 | 40 | 30 |

a) Make the simple bar graph. [2]

b) In which subject Rajesh scored the highest marks? [1]

**Good Luck**

**Model Question Second Term - 2081**

**Class : 7 F.M. 50**

**Time : 2Hrs Sub: Com. Mathematic P.M.20**

**Attempt all the questions.**

1. Read the questions and answer.

a) Two given sets are A = {1, 2, 3, 4, 5}, B = {5, 10, 15};

i) Are the sets A and B disjoin or overlapping? [1]

ii) Write the cardinal number of set B. [1]

iii) Define overlapping set. [1]

2. a) The ratio of length and breadth of a room is 3:2, if the room is 18ft long; find

the following;

i) The breadth of the room. [1]

ii) The perimeter of the room. [2]

iii) The area of the floor of the room. [2]

b) 24 students in a hostel had provisions enough for 30 days. If 26 more students join the hostel, how long would the provisions last? [3]

3. a) 45, 60 and 75 are three given whole numbers;

i) Write the factors of these number separately. [2]

ii) Find the HCF of these numbers. [2]

iii) Write the full form of HCF. [1]

b) What should be added to (-10) to get (+10)? [1]

4. a) Mrs. Kanchhi Tamang has a vegetable garden of length 30m and breadth

18m;

i) Find its perimeter. [1]

ii) Find the length of wire required to fence it with 3 round. [2]

b) The surface area of a cube is 24cm2;

i) Find the length of its edge. [1]

ii) Find its volume. [1]

5. a) Identify the expression and write the degree of expression (3x2-2y2+4). [2]

b) Find the product to 3p(2p2-1). [1]

c) If p - = 3, find the value of p2 + . [2]

6. The sum of length and breadth of room is 25m;

a) Write the equation. [1]

b) If the length of room is 12cm. Find the breadth. [1]

c) Solve the inequality x +2 > 5. [1]

7. Mr. Hira asked some questions to his students are given below then answer this question;

a) Which product is law of indices? [1]

i) aman = am+n ii) am÷an = am-n iii) ()m = iv) ac = 1

b) Evaluate: 251/2 [1]

8. A(3, 6), B(2, 4) and C(5, 7) are the vertices of ABC. Find the coordination of its image under the reflection about x-axis. [2]

9. a) Construct a triangle ABC in which AB = 5cm, <A = 600 and <B = 300. [3]

b) Which type of triangle is this on the basic of side? [1]

c) What is the sum of interior angle of a triangle? [1]

A

10.

B

D

C

1100

a0

x0

F

G

E

H

y0

1. In the above given figure;

i) Find the value of x0 and y0. [2]

ii) Find the alternate angle of <DBE. [1]

iii) Write the parallel line of DC. [1]

11. a) Find the value of unknown side of given right angle. [2]

b) Write the relation between hypogenous,

A

base and perpendicular in Pythagoras

theorem. [1]

1. What is the measure of all interior 6cm

angle of right angled triangle? [1]

C

B

8cm

12. a) Find the average of given data 20, 11, 14, 12, 15. [12]

b) Write the formula of mean. [1]

c) Write the tally of 14. [1]

**Good Luck**

**Model Question Third Term - 2081**

**Class : 7 F.M. 50**

**Time : 2Hrs Sub: Com. Mathematic P.M.20**

**Attempt all the questions.**

1. A = {Natural numbers up to 5}, B = {Factors of 6}, C = {Vowel letters of English alphabet} and D = {Factors of 12} are give;

a) Which of the four sets are equivalent sets? [1]

b) Write the value of n(B). [1]

c) Is set B a proper subset of set D? Write with reason. [1]

2. a) Calculate the cost of 30 pens if Ram bought 12 pens for Rs. 132. [2]

b) What is integer? [1]

c) Simplify: (+9) + (-7) – (+2) [1]

d) Identify the rational number: , , and [1]

3. Students of class 7 collected 6 red balloons and 18 yellow balloons in order to decorate their classroom for celebrating children's day then;

a) Find the ratio of numbers of red and yellow balloons. [1]

b) If 6 of the yellow balloons got burst while inflating them, find the new ratio of red and yellow. [2]

4. Sita has 48 apples, 60 bananas and 96 guavas then;

a) Find the maximum number of people to whom these fruits can be equally distributed. [2]

b) What is the share of each person? [1]

c) Ramesh bought 4 kg of potatoes, and 5 kg of tomatoes from a shop. Find the total weight of vegetables bought by him. [2]

d) What will be the profit if a blanket bought for Rs. C.P is sold for Rs. S.P. If S.P. is greater than C.P.? [1]

5. The school management committee of BSS planned to construct a building having length 20m, breadth 15m and height 10m respectively, the;

a) Write the formula to calculate the area of base of building. [1]

b) Calculate the total volume of building. [1]

c) How many rooms having dimensions 5m4m can be constructed in that building? [2]

d) If the cost of constructing one room is Rs. 60,000 then, calculate the total cost of constructing all the rooms in the building. [2]

6. a) Find the product of ; (a+b) (a-b) [1]

b) What should be the power of 5 so that it's value will be 1? [1]

7. a) Solve and show it in number line; 3x+5 20 [2]

b) If the perimeter of a rectangular room is (12x+18y)m and its breadth is (4x+7y)m, then find its length. [2]

8.a) If the sum of two consecutive odd number is 36. Find them. [1]

b) Solve the given equation and show in graph. [2]

y = x – 2

|  |  |  |  |
| --- | --- | --- | --- |
| x |  |  |  |
| y |  |  |  |

9. a) Define vertically opposite angles. [1]

b) Find the size of an angle which is four times its compliment. [1]

c) If (2x-25)0 and (x+55)0 are a pair of alternate angles, find any one of them. [2]

10. a) If ABC and DEF are congruent triangles, find the length of sid DE. [1]

D

A

5cm 5.5cm 5.5cm

F

B

E

C

5.2cm 5.2cm

b) Find the value of x. [3]

B

A

720

E

x

C

D

800

H

c) Construct a triangle xyz in which xy = 5.5cm, yz = 6cm and <y = 600. [3]

11. a) Plot the points P(2, -2), Q (6, -2) & R (6, 4) in graph paper. [2]

b) What should be the co-ordinate of point 'S' so that PQRS becomes a perfect rectangle? [1]

12. a) Find the average; 20, 11, 14, 15 [2]

b) Write tally marks for 8. [1]

**Good Luck**

**Model Question Annual Term - 2081**

**Class : 7 F.M. 50**

**Time : 2Hrs Sub: Com. Mathematic P.M.20**

**Attempt all the questions.**

1. P = {Factors of 12}, Q = {multiples of 3 less than 15}, R = {odd number less than 12};

a) Which of the above sets are equivalent set? [1]

b) State with reason, whether the set Q is finite or infinite set. [1]

c) Write any two subsets of set R. [1]

2. In a quiz competition held in BSS, eight teams are participated. The rules of quiz competition are given;

i) for each correct answer, +12 points.

ii) for each incorrect answer, -5 points

iii) for not giving answer, 0 (zero points)

a) Team Devchuli answer 10 questions correctly, and answered 4 questions incorrectly. How many points did the team Devchuli collected? [2]

b) Find the square root of score collected by team Devchuli. [1]

c) Define ratio. [1]

3. A shopkeeper sold 8 copies for Rs. 320;

a) What is the selling price of a copy? [1]

b) If he purchased a copy for Rs. 30. Find his profit or loss percent. [2]

c) To make a profit of Rs. 56, at what rate a copy should be sold? [1]

4. The monthly income of Mrs. Mahamaya is Rs. 60,000, she spends part of her income in education, parts in food and saves rest in a bank every month.

a) What parts of her income does she spend? [2]

b) How much money does she save in the bank in a year? [2]

c) Express in decimal. [1]

d) Identify the rational number; , , , [1]

5. Umesh Pradhan bought a triangular shaped piece of land having sides 20m, 30m and 40m. If he built a cuboidal building having length, breadth and height 10m, 8m and 12m respectively on that land;

a) Find the perimeter of land. [1]

b) Find the volume of building. [1]

c) While fencing his land 2 rounds he was short of 15 meters wire, how many meters of wire did he purchase? [2]

d) Write the relation between diameter and circumference of a circle. [1]

6. A rectangular playgroud is show in

figure with its length (2x+y)m and (x+2y)

breadth (x+2y)m.

1. What is the area of this playground? [2] (2x+y)
2. If x = 4 and y = 2, which of the length or breadth should be increased by how much so that a square playground is made? [2]

7. a) What is the value of y0, if y 0. [1]

b) Simplify; (xp-q)r, (xq-r)p. (xr-p)q [2]

8. a) Write down the inequality represented by the given number line. [1]

-4 -3 -2 -1 0 1 2 3 4 5

b) Solve 3x – 2 10 and show in number line. [2]

E

B

A

9. a) Write the relationship between

250

<NFC and <NFD. [1]

x

N

1. Find the value of x. [2]

300

F

C

D

10. a) Define co-ordinate of a point. [1]

b) A(3, 6), B(2, 4) and C(5, 7) are the vertices of ABC. Find the co-ordinates of its image under the reflcetion about x-axis and show in grahph. [3]

1. Are PQR and ABC congruent? Write with reason. [2]

P

A

4cm 5cm 4cm 5cm

R

Q

C

B

3cm 3cm

11. a) Are all rhombus square? [1]

b) Find the missing side. [2]

A

12cm ?

C

B

5cm

12. The table given below shows the number of student of a school from class 6 to 10.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Class | 6 | 7 | 8 | 9 | 10 |
| No. of student | 20 | 30 | 35 | 25 | 15 |

1. Show the above data in line graph. [2]
2. On which class is the number of student maximum? [1]

**Good Luck**