

Annual Examination, April 2011**Class : 6****Subject: Mathematics****Medium : English****Marks: 100****Time : 2½ hours****PART – A****Time: 2 hours****Marks: 80**

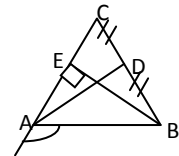
Two sections (A,B) from each domain are given. Answer two from each section.

I. Understanding Mathematical concepts**(4x6=24)****Section – A**

- Using the rules of divisibility, test which of 2,3,4 divides 26346 exactly.
- (a) Verify that 30,15,4,2 are in proportion or not
(b) If 20,15,8, x are in proportion find x
- Separate the like terms from the following and add them
 $34xy^2, 2xyz, 3x^2y, 3xyz, -4x^2y, 4xy^2$

Section – B

- In the adjacent figure, state the median, exterior angle and altitude of the triangle.
- The length and breadth of a rectangle are in the ratio 3:2. If its length is 24m find its area.
- A trader has 3 different kinds of pulses of weights 50 kg, 75 kg, 100 kg. He has bags of equal capacity to fill these pulses. What is the maximum quantity of pulses that can be filled in these bags.

**II. Problem solving – different methods****(4x6=24)****Section – A**

- Simplify $(19-6) \times [19 + \{15 + 8 - 3\}]$
- If $x:y = 1\frac{2}{3} : 1\frac{3}{4}$, $y:z = 2\frac{1}{3} : 3\frac{1}{4}$ then find $x:y:z$
- Add in column method
 $2x^3 + 3x^2 - x - 5$, $x^3 - 3x^2 + 6$, $x^2 + 2x - 5$

Section – B

10. Without using protractor, draw 60° , 120° angles using scale and compass
11. Find the perimeter of a rectangle whose length is 20cm, breadth is 10cm.
Find the length of side of a square with same perimeter.
12. The weights of 20 students are given below in kgs. Group the following data by taking the length of the class interval as 10.

41	33	56	38	29	28	37	43	51	46
42	53	47	44	35	45	52	40	30	39

III. Logical thinking and Reasoning (4x4=16)

Section – A

13. Arrange $\frac{5}{6}, \frac{5}{4}, \frac{5}{1}, \frac{5}{7}, \frac{5}{3}, \frac{5}{2}$ in ascending order without changing them into like fractions.
14. Fill up the boxes

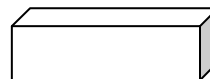
$$\frac{5}{8} = \frac{25}{\square} = \frac{\square}{120} = \frac{\square}{72} = \frac{50}{\square}$$
15. A student has done the multiplication of $6x^2y+9xy$ by $3xy$ as follows

$$\begin{array}{r}
 6x^2y+9xy \\
 \times \quad 3xy \\
 \hline
 (6x^2y \times 3xy) + (9xy \times 3xy) \\
 (6 \times 3)x^2y + (9 \times 3)xy \\
 18x^2y + 27xy
 \end{array}$$

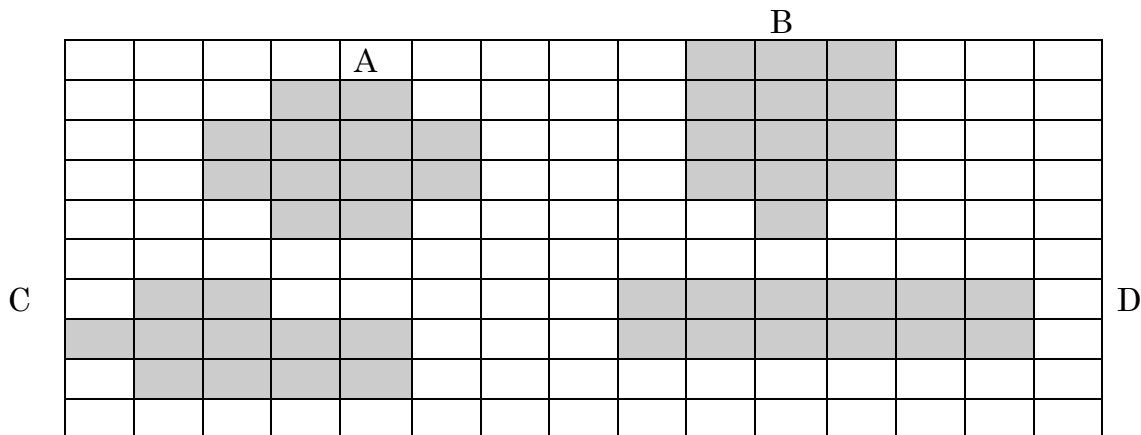
Did the student do the problem correctly or not? If not correct it.

Section – B

16. To prepare a cuboid with paper as shown.
Explain the procedure to the cut the paper.

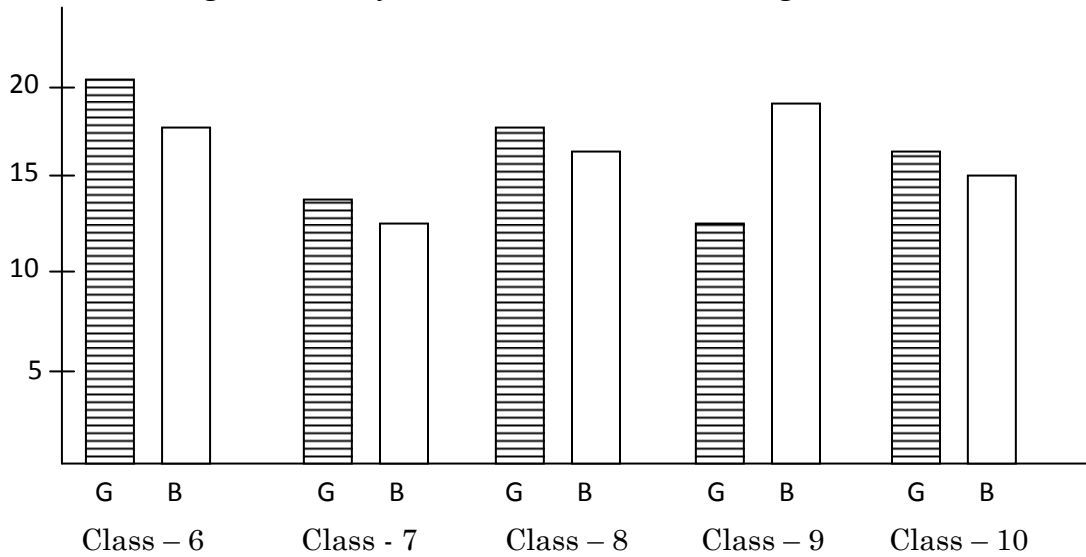


17.



In the above figure, which two figures have the same area?

18. Details of girls and boys of 5 classes a school one given in below in the graph



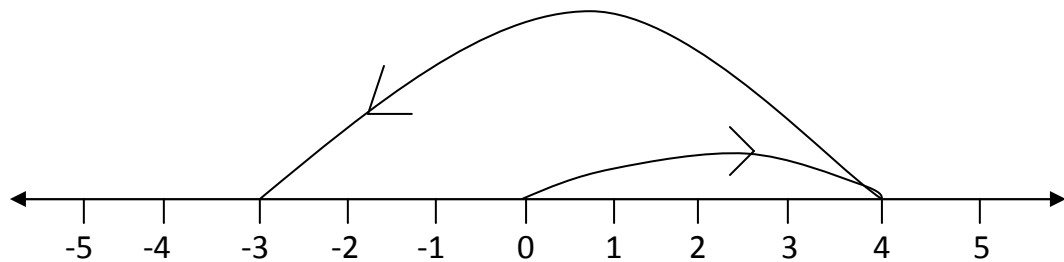
Examine the graph and explain what do you observe

IV. Expressing in mathematical language

(4x4=16)

Section - A

19.



Write a problem for the solution which is shown on the number line.

20. Write a situation in which two quantities are in inverse proportion

21. Using Mathematical operations and variables show the relation between cost price, selling price, profit and loss

Section - B

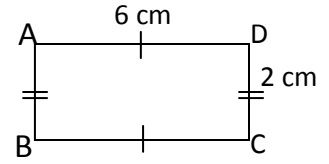
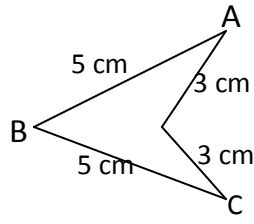
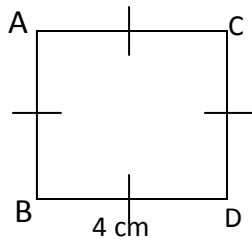
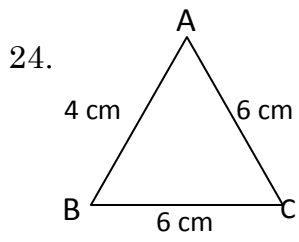
22. How do you determine that two lines are parallel

23. A pictograph showing the number of students of 5 classes in a school is given below:

Scale: ♀ = 10 students

Class 1	♀ ♀
Class 2	♀
Class 3	♀ ♀ ♀
Class 4	♀ ♀
Class 5	♀ ♀ ♀ ♀

Write the number of students present in each class.



Observe the shapes of figures given above and comment on the relation between their perimeters.