NEW STANDARD ACADEMY

Marks: 60

Date : 06-01-25 **CLASS : 10TH** **Time: 2 HRS**

BIOLOGY

1. Only variation that confir an advantage to an individual organisms will survive in population, justify this statement.
2. What is a difference between incomplete dominance and co-dominance also give the example.
3. Where Mandal born and who re- discover Mendels work, why his work not recognized give three reasons
4. The cross between **AaBB & aaBB** will form? Explain by schematic diagram
5. In a typical monohybrid cross the F2 generation is written as 3:1 for phenotype but expressed as 1:2:1for genotype ,explain with the help of example.
6. What is law of purity of gamet, explain with example.
7. On crossing two heterozygous tall plants(Tt), a total of 500 plants were obtained in F_1 generation .What will be the respective number of tall and dwarf plants obtained in the F_1 generation?

Information Technology

1. Consider the above given table and write SQL queries.

TABLE: SHOPPE		
Id	S Name	Area
S001	ABC Computeronics	CP
S002	All Infotech Media	GK II
S003	Tech Shoppe	CP
S004	Geeks Tecno Soft	Nehru Place
S005	Hitech Tech Store	Nehru Place

(I) Display Id and S Name of all the shops located in Nehru Place.

(ii) Display the details alphabetically by S Name.

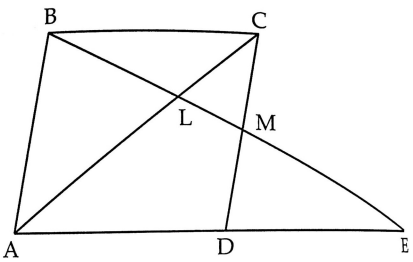
2. Samiksha is working on an advanced spreadsheet project and wants to understand the use of some key tools in data analysis. She asks, "Describe the use of the following terms:

(i) Goal Seek
(ii) Scenario

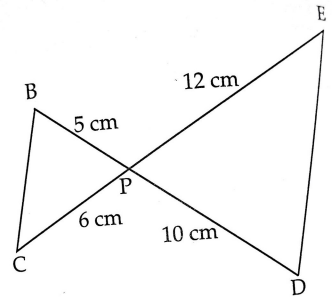
3. Explain some of the ways to remove workplace hazards.
4. Differentiate between the Keep Scale and Keep Image Size options.
5. Write four qualities of those person who work independently.
6. How does entrepreneurs and entrepreneurship contributes to society?
7. Explain the Barriers of the Effective Communication.
8. Describe the meaning and importance of sustainable development.

MATHS

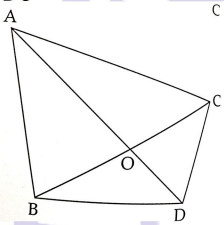
1. Through the mid –point M of the side CD of a parallelogram ABCD the line BM is drawn intersecting AC at L and AD produced in E. Prove that EL= 2BL.



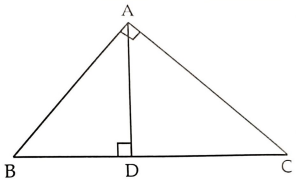
2. In the adjoining figure BD and CE intersect each other at the point P.Is $\Delta PBC \sim \Delta PDE$? Give reasons for your answer.



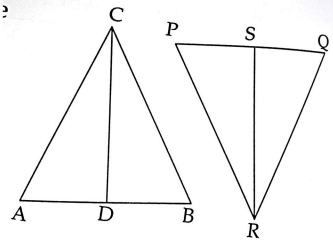
3. If $\Delta ABC \sim \Delta DEF, AB = 4cm, DE = 6, Ef = 9cm \text{ and } FD = 12$ cm then find the perimeter of ΔABC.
4. In the adjoining figure, ABC and DBC are two triangles on the same base BC. If AD intersects BC at O, show that $\frac{ae(\Delta ABC)}{ar(\Delta DBc)} = \frac{AO}{DO}$.



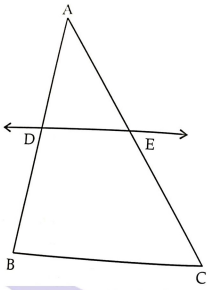
5. The perimeters of two similar triangles are 30cm and 20cm respectively. If one side of the first triangle is 9 cm long , Find the length of the corresponding side of the second triangle.
6. In the adjoining figure ,$\angle A = 90°$ and AD$\perp$ BC. IF BD = 2 cm and CD =8 cm ,find AD.



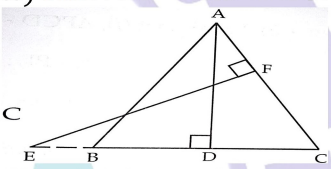
7. In the given figure CD and RS are respectively the medians of $\Delta ABC \text{ and } \Delta PQR. If\ \Delta ABC \sim \Delta PQR \text{ then}$ prove that
(i) $\Delta ADC \sim \Delta PSR$
(ii) AD$\times$ $PR = AC \times PS$.



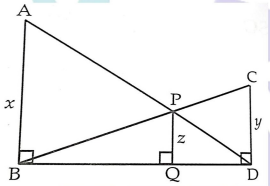
8. In the adjoining figure DE||BC.
i) If AD =2.4 cm ,AE=3.2 cm and EC = 4.8cm then find AB.
ii) If$\frac{AD}{DB} = \frac{3}{5}$ and AC = 4.8 cm find AE.



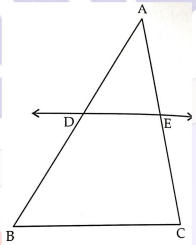
9. In the adjoining figure E is a point on the side CB produced of an isosceles triangle ABC with AB=AC.If AD$\perp$ BC and EF$\perp$ AC, prove that:
i) $\Delta ABC \sim \Delta ECF$
$ii)$ AB$\times$ $EF = AD \times EC$.



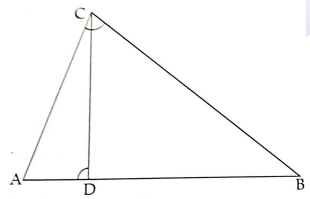
10. Side AB ,BC and median AD of a triangle ABC are respectively proportional to the side PQ,QR and median PM of another triangle PQR. Show that $\Delta ABC \sim \Delta PQR$.
11. In the adjoining figure $\angle ABD = \angle CDB = \angle PQB = 90^0$.If AB=x units CD =y units and PQ=z units prove that $\frac{1}{x} + \frac{1}{y} + \frac{1}{z}$.



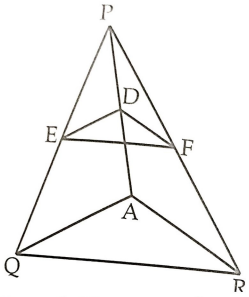
12. If AD =4x -3 AE =8x -7 BD=3x -1 and EC=5x-3 find the value of x



13. In the adjoining figure $\angle ABC = \angle CDA$. If AC=8 cm and AD =3 cm find BD.



14. In the adjioninjg figure DE|| AQ and DF||AR. Prove that EF|| AQ.



15. X and Y are points on the sides AB and AC respectively of a triangle ABC such that $\frac{1}{4}, AY = 2cm$ and YC =6 cm. Find whether XY||BC or not.