

NEW STANDARD ACADEMY

Exam : MOCK-

Date : 21-08-23

CLASS : 9TH (M)

Marks: 60

Time: 2HRS

PHYSICS

1. Give difference between 'g' and 'G' in a tabular form.
2. Derive a relationship between "g" and "G".
3. The gravitational force between two objects is F. How will this force change, when:
(i) Distance between them is reduced to half?
(ii) The mass of each object is quadrupled?.
4. A sphere of mass 40 kg is attracted by a second sphere of mass 15 kg when their centres are 20 cm apart, with a force of 0.1 milligram weight. Calculate the value of gravitational constant.
5. An object is thrown vertically upwards and reaches a height of 78.4 m. Calculate the velocity at which the object was thrown?.
($g = 9.8m/s^2$)
6. The weight of a body is less inside the earth than on the surface. Why?
7. Calculate the force of attraction between two bodies of masses 100 kg and 60 kg respectively separated by a distance of 5 m from each other

CHEMISTRY

1. Is it possible to turn a liquid into vapour without heating?
2. A system which have same properties throughout is called-
3. Give natural example of mixture.
4. Give an example of a liquid and liquid type solution.
5. Define the term heterogeneous.
6. What is the general name of the materials which contain at least two pure substances and show the properties of their constituents?

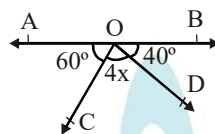
BIOLOGY

1. Name the three major groups of the kingdom : Protista.
2. Name the reproductive organs of -
(i) Gymnosperms (ii) Angiosperms.

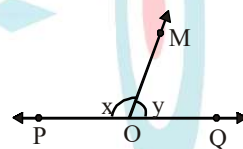
3. Define mycorrhiza. How is it beneficial to the organisms ?
4. What are the salient features of kingdom Fungi ?
5. What are lichens ? Give any two uses of lichens
6. Write the characteristics of seedless vascular plants (Pteridophytes).
7. How would you distinguish monocots from dicots?

MATHS

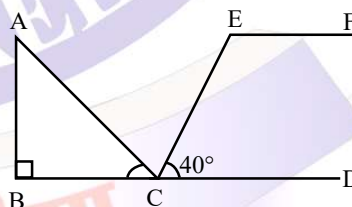
1. In figure, AOB is a line, determine x.



2. In figure, $\angle POM$ and $\angle QOM$ form a linear pair. If $x - 2y = 30^\circ$, find x and y.

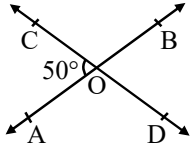


3. At 4.24 pm, how many degrees has the hour hand of a clock moved from its position at noon?
4. In the figure if $BD \parallel EF$, then find $\angle CEF$.

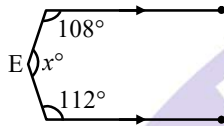


5. Find the measure of an angle which is 20° more than its complement.
6. An angle is equal to five times its complement. Determine its measure.
7. Two supplementary angles are in the ratio 2 : 3. Find the angles.

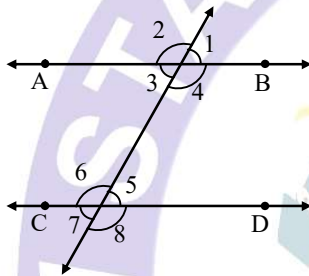
8. Two lines AB and CD intersect at O. If $\angle AOC = 50^\circ$, find $\angle AOD$, $\angle BOD$ and $\angle BOC$.



9. In figure $AB \parallel CD$. Find the value of x .



10. In fig, given that $AB \parallel CD$.



- (i) If $\angle 4 = (x + 20)^\circ$ and $\angle 5 = (x + 8)^\circ$, find the measure of $\angle 4$ and $\angle 5$.
- (ii) If $\angle 2 = (3x - 10)^\circ$ and $\angle 8 = (5x - 30)^\circ$, determine the measures of $\angle 2$ and $\angle 8$.
- (iii) If $\angle 2 = (2x + 30)^\circ$, $\angle 4 = (x + 2y)^\circ$ and $\angle 6 = (3y + 10)^\circ$, find the measure of $\angle 5$.
- (iv) If the complement of $\angle 5$ equals the supplement of $\angle 4$, find the measures of $\angle 4$ and $\angle 5$.