

KENDRIYA VIDYALAYA MAHABUBABAD
HOLIDAYS HOMEWORK (AUTUMN BREAK 2020)
CLASS X

SUBJECT	HOME WORK
ENGLISH	1. Write the summary of The Ball Poem and Animals in your own words. 2. Write the character sketch of the characters Peggy, Maddie and Wanda? What moral values did you learn from the two chapters on Hundred Dresses
SCIENCE	1. 'Construction of dams is an important step towards conservation of water'. Do you agree with this statement. Justify your answer by citing relevant examples. 2. How management of natural resources takes place? What do you think that the frequency with which fossil fuels are being used up, will it be available for our next generations also? Justify in detail.
HINDI	किन्हीं दो कवियों का जीवन परिचय लिखिये 2 रस के स्थायी भाव लिखिये 3 कोरोना महामारी तथा आने वाले त्योहारों के बीच किस प्रकार की सावधानियां अपनानी पड़ेगी। उचित सुझाव देते हुए एक रिपोर्ट तैयार कीजिये।
SANSKRIT	1) 'संस्कृत साहित्य का इतिहास' पर एक संक्षिप्त निबंध लिखिए। 2) संस्कृत भाषायाम समयं लिखत। 1:00 - 12:45 पर्यन्तं। 3) अवयव प्रयोग कृत्वा वाक्यनिर्माणं करोतु। 4) कोविड 19 के समय मे बथुकम्मा/ दशहरा उत्सव पर सूचना तैयार करिये।

Mathematics

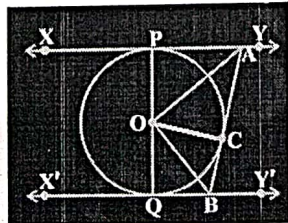
SET -A

1. Find the distance between the points: (2, 3), (4, 5)
2. Determine if the points (1, 5), (2, 3) and (-2, -11) are collinear.
3. Express the trigonometric ratio $\sin A$ in terms of $\cot A$.

4. A kite is flying at a height of 60 m above the ground. The string attached to the kite is temporarily tied to a point on the ground. The inclination of the string with the ground is 60° . Find the length of the string, assuming that there is no slack in the string.
5. From a point on the ground, the angles of elevation of the bottom and the top of a transmission tower fixed at the top of a 20 m high building are 45° and 60° respectively. Find the height of the tower.
6. If $\tan(A + B) = \sqrt{3}$ and $\tan(A - B) = 1/\sqrt{3}$, $0^\circ < A + B \leq 90^\circ$; $A > B$, find A and B.
7. If Q (0, 1) is equidistant from P (5, -3) and R (x, 6), find the values of x.
8. If A and B are (-2, -2) and (2, -4), respectively, find the coordinates of P such that $AP = 3/7 AB$ and P lies on the line segment AB.
9. Prove that : $(1 + \tan^2 A) / (1 + \cot^2 A) = \tan^2 A$
25. Prove that : $(\sin \theta - 2\sin^3 \theta) / (2\cos^3 \theta - \cos \theta) = \tan \theta$
10. Find the coordinates of the points which divide the line segment joining A (-2, 2) and B (2, 8) into four equal parts.
11. The angles of elevation of the top of a tower from two points at a distance of 4 m and 9 m from the base of the tower and in the same straight line with it are complementary. Prove that the height of the tower is 6 m.

SET - B

1. Prove that : $(\sin \alpha + \cos \alpha) (\tan \alpha + \cot \alpha) = \sec \alpha + \operatorname{cosec} \alpha$
2. Find the coordinates of the point which divide the join of (-1,7) & (4,-3) in the ratio of 2:3.
3. Express the trigonometric ratio $\sin A$, $\sec A$ in terms of $\cot A$
4. XY and X'Y' are two parallel tangents to a circle with centre O and another tangent AB with point of contact C intersecting XY at A and X'Y' at B. Prove that $\angle AOB = 90^\circ$.



5. Find the ratio in which line segment joining A(-3,10) and B(6,-8) is divided by (-1,6).
6. A 1.2 m tall girl spots a balloon moving with the wind in a horizontal line at a height of 88.2 m from the ground. The angle of elevation of the balloon from the eyes of the girl at any instant is

60° . After some time, the angle of elevation reduces to 30° (see Fig. 9.13). Find the distance travelled by the balloon during the interval.



Fig. 9.13

7. Prove that the ratio of the areas of two similar triangles is equal to the square of the ratio of their corresponding medians.