



**VASISHTHA
GENESIS
SCHOOL**
BARDOLI, DIST. SURAT, GUJ



DIWALI ASSIGNMENT CLASS : IX

Student's Name: _____

Division: _____ Roll No: _____



At. & Po. Baben, Tal. Bardoli, Dist. Surat



Dear Parents,
Greetings from VGS Family!

As we celebrate the Festival of Lights, Diwali, we extend our warmest greetings and best wishes to you and your family. May this joyous occasion bring happiness, prosperity, and togetherness into your lives.

We are excited to share the spirit of Diwali with your children at school. Diwali is a time for reflection, renewal, and gratitude. It is a time to celebrate the triumph of light over darkness and good over evil.

Along with this message, we have enclosed subject-wise Diwali assignment sheet(s) for your child, each thoughtfully designed to enhance their understanding, while reinforcing their academic growth. We believe that these assignments will not only allow your child to appreciate the cultural and spiritual significance of Diwali but also promote their subject-specific knowledge and skills.

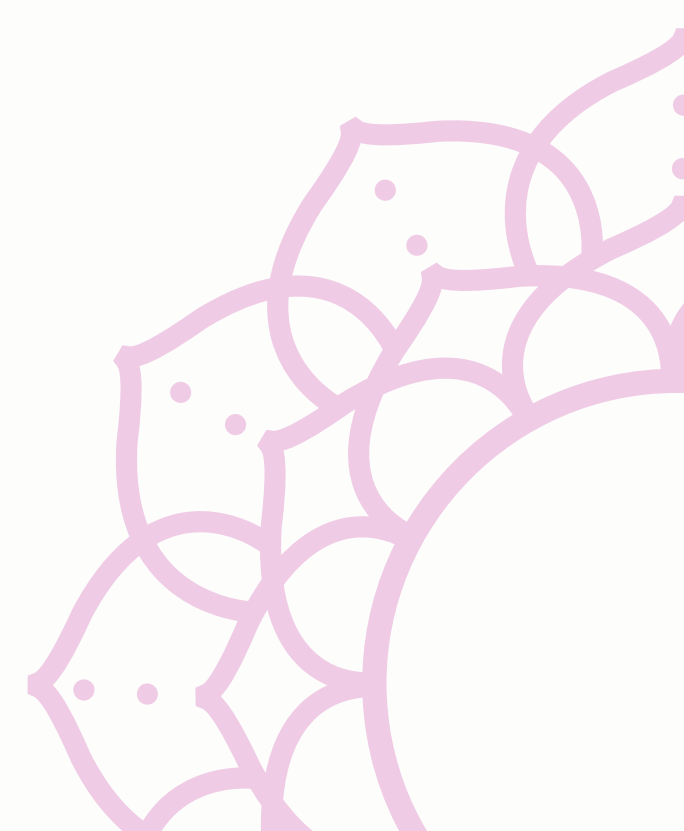
We kindly request that you encourage your child to complete these assignments enthusiastically and curiously. Our teachers have carefully curated them to align with their ongoing subjects, ensuring a seamless blend of celebration and education. Should your child require any support or clarification, please do not hesitate to reach out to our dedicated teaching staff.

We wish you a Diwali filled with love, joy, and the company of loved ones. May this festival illuminate your lives with positivity and prosperity, and may the completion of these assignments further brighten your child's academic journey.

Once again, wishing you all a Happy Diwali and a Prosperous New Year!

Warm regards,

Dr Gautam Guha
Principal



VASISHTHA GENESIS SCHOOL, BABEN, BARDOLI
DIWALI ASSIGNMENT
CLASS 09

SUBJECT	TASK ASSIGNED												
ENGLISH	<p>Reading Task:- Read the book Wings of Fire by A.P.J Abdul Kalam after reading the book do the character analysis of A.P.J Abdul Kalam based on STEAL (Spoken words, Teachings, Emotions, Actions, Looks)</p> <ul style="list-style-type: none"> Take an A3 size paper and present the character analysis on it. Pictorially present the storyline of Happy Prince on a chart paper. 												
MATHEMATICS	SEPARATE QUESTIONS ATTACHED HEREWITH												
SOCIAL SCIENCE	<p>Prepare an Inter-Disciplinary Project on the following chapters with Art/Subject Integration:</p> <p>1. Chapter - 4 History - Forest Society and Colonisation 2. Chapter - 5 Geography - Natural Vegetation and Wildlife</p> <ul style="list-style-type: none"> Students can choose any form of art to prepare for the project. Some suggested activities are given below: <ul style="list-style-type: none"> ✓ Poster on Save Wildlife ✓ PPT on Deforestation by the British Government ✓ Video on Any topic from the chapter mentioned above ✓ Timeline, Concept Maps, etc. 												
SCIENCE	<p>PHYSICS & Information Technology (Hard Copy also required)</p> <ul style="list-style-type: none"> Students can choose any form of art to prepare for the project. <p>How to do: Prepare a PPT on the topics mentioned below as per your roll numbers.</p> <table border="1"> <thead> <tr> <th>TOPIC</th><th>ROLL NUMBERS</th></tr> </thead> <tbody> <tr> <td>The universal law of gravitation</td><td>01 - 08</td></tr> <tr> <td>Free fall and the calculation of value of g</td><td>09 - 16</td></tr> <tr> <td>Mass and weight</td><td>17 - 24</td></tr> <tr> <td>Buoyancy and principle of floatation</td><td>25 - 32</td></tr> <tr> <td>Thrust and pressure</td><td>33 - last</td></tr> </tbody> </table> <p>BIOLOGY: Prepare a brief write-up on the management of the following natural resources: <u>AIR AND WATER.</u></p> <ul style="list-style-type: none"> Your write-up may also include: <ul style="list-style-type: none"> ✓ Concept map / Mind map / Pictures <p>NOTE - The write-up including relevant explanation of the selected topic should be completed in less than 7-8 pages in A4 size project papers.</p> <p>CHEMISTRY: Learn all the atomic models of 'Ch.4 The Structure of the Atom' and also learn 30 elements from Hydrogen to Zinc from the periodic table with their atomic numbers.</p>	TOPIC	ROLL NUMBERS	The universal law of gravitation	01 - 08	Free fall and the calculation of value of g	09 - 16	Mass and weight	17 - 24	Buoyancy and principle of floatation	25 - 32	Thrust and pressure	33 - last
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HINDI	<p>निम्नलिखित पाठ्यपुस्तक को पढ़कर पाठ के शीर्षक एवं लेखक तथा कवियों के नामों के साथ उनके चित्र लगाकर संक्षिप्त परिचय नोटबुक में लिखिए।</p> <ul style="list-style-type: none"> स्पर्श संचयन 												
GUJARATI	<p>ગુજરાતી પાઠ્યપુસ્તકમાં આપેલા પાઠો અને કવિતા વાંચી તેના લેખક અને કવિઓના ચિત્ર લગાવી તેમનો ટુંકમાં પરિચય નોટબૂકમાં આપો.</p>												

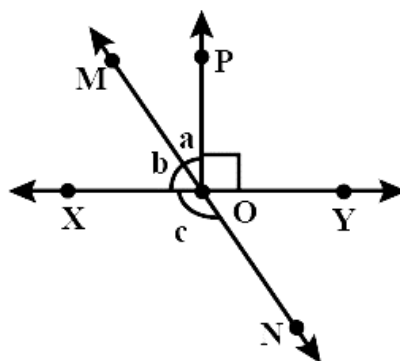
PTO for Mathematics →

2. POLYNOMIALS

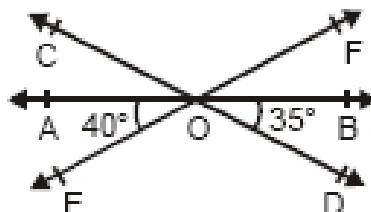
- What is zero polynomial? Give 4 examples and explain them.
 - What is constant polynomial? Give 4 examples and explain them.
- If $x^2 + \frac{1}{x^2} = 18$, then find the value of $x - \frac{1}{x}$.
- Write the following cubes in the expanded form:
 - $(3a + 4b)^3$
 - $(5p - 3q)^3$
- Find the value of k , if $(x - 1)$ is a factor of $4x^3 + 3x^2 - 4x + k$.
- If $x - \frac{1}{x} = 4$, then evaluate $x^2 - \frac{1}{x^2}$ and $x^4 - \frac{1}{x^4}$

6. LINES & ANGLES

- Can a triangle have two obtuse angles? Give reason for your answer.
- The exterior angles obtained on producing the base of a triangle both ways are 100° and 120° . Find all the angles.
- In figure, lines XY and MN intersect at O . If $\angle POY = 90^\circ$ and $a : b = 2 : 3$, find c .

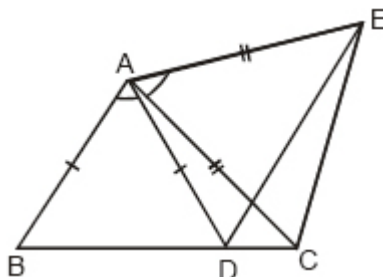


- In the given figure, lines AB , CD and EF intersect at O . Find the measure of $\angle AOC$, $\angle COF$

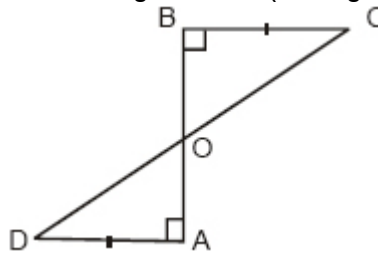


7. TRIANGLES

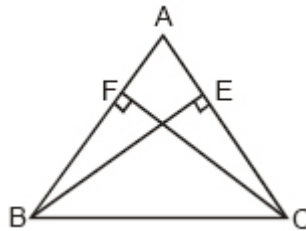
- Write all the congruency criteria of triangles along with the explanations and examples of each of them.
- In two triangles ABC and DEF , $AB = DE$, $BC = DF$ and $AC = EF$, then ____
 - $\triangle ABC \cong \triangle DEF$
 - $\triangle ABC \cong \triangle EFD$
 - $\triangle ABC \cong \triangle FDE$
 - none of these
- In the figure, $AC = AE$, $AB = AD$ and $\angle BAD = \angle EAC$. Show that $BC = DE$



- 4 AD and BC are equal perpendiculars to a line segment AB (see figure). Show that CD bisects AB.



- 5 ABC is a triangle in which altitudes BE and CF to sides AC and AB are equal (see figure). Show that
 (i) $\triangle ABE \cong \triangle ACF$
 (ii) $AB = AC$, i.e. ABC is an isosceles triangle



8. QUADRILATERALS

- 1 Prepare the flow chart on types of quadrilaterals showing the properties of each of them in detail.
(on chart paper)

10. HERON'S FORMULA

- 1 Find the area of a triangle, two sides of which are 8 cm and 11 cm and the perimeter is 32 cm
 2 Sides of a triangle are in the ratio of 12 : 17 : 25 and its perimeter is 540cm. Find its area
 3 A triangular park has sides 120 m, 80 m and 50 m. A gardener has to put a fence all around it and also plant grass inside. How much area does he need to plant? Find the cost of fencing it with barbed wire at the rate of Rs. 20 per metre, leaving a space of 3 m wide for a gate on one side.
 4 The sides of a triangular plot are in the ratio of 6 : 7 : 8 and its perimeter is 420 m. Find its area.
 5 Parul has a piece of land which is in the shape of a rhombus (see fig.) She wants her daughter and son to work on the land and produce different crops. She divided the land in two equal parts. If the perimeter of the land is 400 m and one of the diagonals is 160 m, how much area each of them will get for their crops?

