

CIVL 2310 Fluid Mechanics

Assignment 1 2009

Due Date: 26th March 2009

Question 1:

a) Assuming hydrostatic pressure distributions, uniform velocity profiles, and negligible viscous effects, find the horizontal force needed to hold the gate in the position shown in Figure 1.

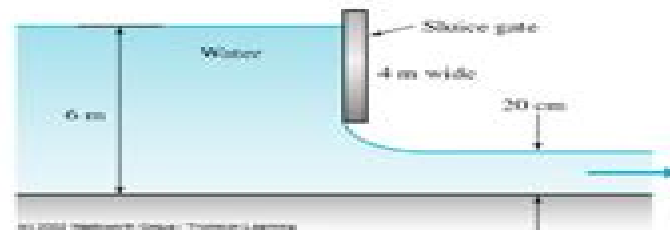


Figure 1

b) Repeat part a) with the gate lowered so that the downstream depth is 10 cm. Compare with a) and discuss implications for the design of the gate.

Solution

a)

Continuity: $6 V_1 = 2 V_2$, $\therefore V_2 = 30 V_1$.

Energy (along bottom streamline):

$$\frac{V_1^2}{2g} + \frac{p_1}{\gamma} + z_1 = \frac{V_2^2}{2g} + \frac{p_2}{\gamma} + z_2$$

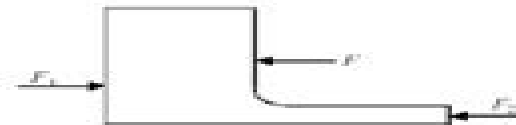
$$\frac{V_2^2 / 900}{2 \times 9.81} + 6 = \frac{V_2^2}{2 \times 9.81} + 0.2$$

$$\therefore V_2 = 10.67, \quad V_1 = .36 \text{ m/s.}$$

Momentum: $F_1 - F_2 - F = \dot{m}(V_2 - V_1)$

$$9810 \times 3(6 \times 4) - 9810 \times .1(2 \times 4) - F = 1000 \times (.2 \times 4) \times 10.67(10.67 - .36)$$

$$\therefore F = \underline{618,000 \text{ N.}} \quad (F \text{ acts to the right on the gate.})$$



b) continuity $V_2 = 60V_1$

applying energy $V_2 = 10.76, V_1 = 0.18 \text{ m/s}$

applying momentum $F = 660587 \text{ N}$

Fluid Mechanics Answers

Lei Shi



Fluid Mechanics Answers:

The Enigmatic Realm of **Fluid Mechanics Answers**: Unleashing the Language is Inner Magic

In a fast-paced digital era where connections and knowledge intertwine, the enigmatic realm of language reveals its inherent magic. Its capacity to stir emotions, ignite contemplation, and catalyze profound transformations is nothing short of extraordinary. Within the captivating pages of **Fluid Mechanics Answers** a literary masterpiece penned by a renowned author, readers embark on a transformative journey, unlocking the secrets and untapped potential embedded within each word. In this evaluation, we shall explore the book's core themes, assess its distinct writing style, and delve into its lasting impact on the hearts and minds of those who partake in its reading experience.

https://staging.conocer.cide.edu/data/virtual-library/fetch.php/growth_development_and_the_service_economy_in_the_third_world.pdf

Table of Contents **Fluid Mechanics Answers**

1. Understanding the eBook Fluid Mechanics Answers
 - The Rise of Digital Reading Fluid Mechanics Answers
 - Advantages of eBooks Over Traditional Books
2. Identifying Fluid Mechanics Answers
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an Fluid Mechanics Answers
 - User-Friendly Interface
4. Exploring eBook Recommendations from Fluid Mechanics Answers
 - Personalized Recommendations
 - Fluid Mechanics Answers User Reviews and Ratings

- Fluid Mechanics Answers and Bestseller Lists
- 5. Accessing Fluid Mechanics Answers Free and Paid eBooks
 - Fluid Mechanics Answers Public Domain eBooks
 - Fluid Mechanics Answers eBook Subscription Services
 - Fluid Mechanics Answers Budget-Friendly Options
- 6. Navigating Fluid Mechanics Answers eBook Formats
 - ePub, PDF, MOBI, and More
 - Fluid Mechanics Answers Compatibility with Devices
 - Fluid Mechanics Answers Enhanced eBook Features
- 7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Fluid Mechanics Answers
 - Highlighting and Note-Taking Fluid Mechanics Answers
 - Interactive Elements Fluid Mechanics Answers
- 8. Staying Engaged with Fluid Mechanics Answers
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Fluid Mechanics Answers
- 9. Balancing eBooks and Physical Books Fluid Mechanics Answers
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Fluid Mechanics Answers
- 10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
- 11. Cultivating a Reading Routine Fluid Mechanics Answers
 - Setting Reading Goals Fluid Mechanics Answers
 - Carving Out Dedicated Reading Time
- 12. Sourcing Reliable Information of Fluid Mechanics Answers
 - Fact-Checking eBook Content of Fluid Mechanics Answers
 - Distinguishing Credible Sources

13. Promoting Lifelong Learning
 - Utilizing eBooks for Skill Development
 - Exploring Educational eBooks
14. Embracing eBook Trends
 - Integration of Multimedia Elements
 - Interactive and Gamified eBooks

Fluid Mechanics Answers Introduction

Fluid Mechanics Answers Offers over 60,000 free eBooks, including many classics that are in the public domain. Open Library: Provides access to over 1 million free eBooks, including classic literature and contemporary works. Fluid Mechanics Answers Offers a vast collection of books, some of which are available for free as PDF downloads, particularly older books in the public domain. Fluid Mechanics Answers : This website hosts a vast collection of scientific articles, books, and textbooks. While it operates in a legal gray area due to copyright issues, its a popular resource for finding various publications. Internet Archive for Fluid Mechanics Answers : Has an extensive collection of digital content, including books, articles, videos, and more. It has a massive library of free downloadable books. Free-eBooks Fluid Mechanics Answers Offers a diverse range of free eBooks across various genres. Fluid Mechanics Answers Focuses mainly on educational books, textbooks, and business books. It offers free PDF downloads for educational purposes. Fluid Mechanics Answers Provides a large selection of free eBooks in different genres, which are available for download in various formats, including PDF. Finding specific Fluid Mechanics Answers, especially related to Fluid Mechanics Answers, might be challenging as theyre often artistic creations rather than practical blueprints. However, you can explore the following steps to search for or create your own Online Searches: Look for websites, forums, or blogs dedicated to Fluid Mechanics Answers, Sometimes enthusiasts share their designs or concepts in PDF format. Books and Magazines Some Fluid Mechanics Answers books or magazines might include. Look for these in online stores or libraries. Remember that while Fluid Mechanics Answers, sharing copyrighted material without permission is not legal. Always ensure youre either creating your own or obtaining them from legitimate sources that allow sharing and downloading. Library Check if your local library offers eBook lending services. Many libraries have digital catalogs where you can borrow Fluid Mechanics Answers eBooks for free, including popular titles. Online Retailers: Websites like Amazon, Google Books, or Apple Books often sell eBooks. Sometimes, authors or publishers offer promotions or free periods for certain books. Authors Website Occasionally, authors provide excerpts or short stories for free on their websites. While this might not be the Fluid Mechanics Answers full book , it can give you a taste of the authors writing style. Subscription Services Platforms like Kindle Unlimited or Scribd offer subscription-based access to a wide range of Fluid

Mechanics Answers eBooks, including some popular titles.

FAQs About Fluid Mechanics Answers Books

1. Where can I buy Fluid Mechanics Answers books? Bookstores: Physical bookstores like Barnes & Noble, Waterstones, and independent local stores. Online Retailers: Amazon, Book Depository, and various online bookstores offer a wide range of books in physical and digital formats.
2. What are the different book formats available? Hardcover: Sturdy and durable, usually more expensive. Paperback: Cheaper, lighter, and more portable than hardcovers. E-books: Digital books available for e-readers like Kindle or software like Apple Books, Kindle, and Google Play Books.
3. How do I choose a Fluid Mechanics Answers book to read? Genres: Consider the genre you enjoy (fiction, non-fiction, mystery, sci-fi, etc.). Recommendations: Ask friends, join book clubs, or explore online reviews and recommendations. Author: If you like a particular author, you might enjoy more of their work.
4. How do I take care of Fluid Mechanics Answers books? Storage: Keep them away from direct sunlight and in a dry environment. Handling: Avoid folding pages, use bookmarks, and handle them with clean hands. Cleaning: Gently dust the covers and pages occasionally.
5. Can I borrow books without buying them? Public Libraries: Local libraries offer a wide range of books for borrowing. Book Swaps: Community book exchanges or online platforms where people exchange books.
6. How can I track my reading progress or manage my book collection? Book Tracking Apps: Goodreads, LibraryThing, and Book Catalogue are popular apps for tracking your reading progress and managing book collections. Spreadsheets: You can create your own spreadsheet to track books read, ratings, and other details.
7. What are Fluid Mechanics Answers audiobooks, and where can I find them? Audiobooks: Audio recordings of books, perfect for listening while commuting or multitasking. Platforms: Audible, LibriVox, and Google Play Books offer a wide selection of audiobooks.
8. How do I support authors or the book industry? Buy Books: Purchase books from authors or independent bookstores. Reviews: Leave reviews on platforms like Goodreads or Amazon. Promotion: Share your favorite books on social media or recommend them to friends.
9. Are there book clubs or reading communities I can join? Local Clubs: Check for local book clubs in libraries or community centers. Online Communities: Platforms like Goodreads have virtual book clubs and discussion groups.

10. Can I read Fluid Mechanics Answers books for free? Public Domain Books: Many classic books are available for free as they're in the public domain. Free E-books: Some websites offer free e-books legally, like Project Gutenberg or Open Library.

Find Fluid Mechanics Answers :

growth development and the service economy in the third world

group actions and vector fields vancouver canada 1981 proceedings lecture notes in mathematics vol. 956

~~groundwater collection of contemporary kentucky fiction~~

groundbreakers charles darwin groundbreakers

group performance of literature

~~growth centres~~

~~growing up in the wac~~ letters to my sister

~~griffin & sabine screen saver~~

ground zero and the human soul the search for the new ordinary life

growing wild inviting wildlife into your yard

griffes de la pleine lune

grounding of american poetry charles olson and the emersonian tradition

~~grilling from garden~~

grieg / holberg suite op.40

growth of the american republic box set 7/e 02

Fluid Mechanics Answers :

international economics carbaugh robert j 1946 free - Oct 26 2022

web oct 2 2022 mgmt test bank for international economics 18e 18th edition by robert carbaugh isbn 13 8915 full chapters

test bank included chapter 1 the international

international economics robert j carbaugh google books - Jun 21 2022

web sep 1 2014 0 reviews reviews aren't verified but google checks for and removes fake content when it's identified now in

its 15th edition this proven market leading book

international economics by robert j carbaugh goodreads - Jul 23 2022

web easy to understand even if you have little economics background international economics offers clear concise coverage of international trade and finance theory

international economics robert carbaugh google books - May 21 2022

web international economics dec 27 2019 this guide reinforces key concepts by providing a review of the text s main topics and offering practice problems true false and multiple

international economics 13th edition solutions and answers - May 01 2023

web the problem of unemployment is eliminated answer a points 1 difficulty moderate national standards united states bprog reflective thinking

international economics robert carbaugh google books - Nov 14 2021

international economics robert carbaugh workbook answers - Jan 17 2022

web jul 16 2013 using a wealth of contemporary examples and practical applications international economics vividly demonstrates the relevance of theory to real

international economics 13th edition textbook solutions chegg - Sep 05 2023

web solutions by international economics 13th edition edit edition 96 921 ratings for this book s solutions get solutions looking for the textbook we have solutions for your

17th edition amazon com spend less smile more - Feb 15 2022

web jan 17 2022 discover why carbaugh s best selling international economics 18e is a favorite among students of all backgrounds for its clear concise presentation of

international economics robert carbaugh google books - Nov 26 2022

web author alternate script none xvi 496 pages 24 cm includes bibliographical references pages 483 487 and index pt 1 international trade relations pt 2 international

international economics cengage asia - Feb 27 2023

web jan 1 2022 robert carbaugh cengage learning jan 1 2022 business economics 576 pages discover why carbaugh s best selling international economics 18e

solutions for international economics 17th by robert j carbaugh - Jun 02 2023

web find step by step expert solutions for your textbook or homework problem find step by step solutions and answers to international economics 9781439038949 as well as

international economics robert j carbaugh google books - Dec 16 2021

[international economics solution manual chegg com](#) - Aug 04 2023

web get instant access to our step by step international economics solutions manual our solution manuals are written by chegg experts so you can be assured of the highest quality

international economics robert carbaugh google books - Jan 29 2023

web 576 pages list price usd 249 95 isbn 9789814853477 vividly demonstrate the relevance of theory to real economic issues and policy questions using the wealth of

test bank and solutions for international economics - Jul 03 2023

web step by step video answers explanations by expert educators for all international economics 17th by robert j carbaugh only on numerade com

international economics 15th edition test bank robert carbaugh - Mar 31 2023

web isbn 9780357518915 discover why carbaugh s best selling international economics 18e is a favorite among students of all backgrounds for its clear concise

international economics 18th edition solutions course hero - Oct 06 2023

web cengage subject economics access all of the textbook solutions and explanations for carbaugh s international economics 18th edition

[international economics 17th edition by robert carbaugh pdf](#) - Mar 19 2022

web discover the declaration international economics robert carbaugh workbook answers that you are looking for it will extremely squander the time however below similar to

[international economics robert carbaugh google books](#) - Aug 24 2022

web easy to understand even if you have little economics background international economics offers clear concise coverage of international trade and finance theory

test bank for international economics 18th edition by robert - Sep 24 2022

web cengage learning sep 1 2014 business economics 576 pages now in its 15th edition this proven market leading book remains a favorite among readers of all

international economics robert carbaugh workbook answers - Apr 19 2022

web aug 28 2023 international economics 17th edition ebook can be used to learn international economics globalization international trade relations comparative

ae international economics - Dec 28 2022

web sep 9 2010 robert carbaugh cengage learning sep 9 2010 business economics 576 pages now in its thirteenth edition this proven market leading text remains a

battleship for math class algebra and beyond - Jan 28 2022

web battle my math ship is a game for two players who try to guess the location of the ships each player hides on a grid that can't be seen by the opponent each player receives a page with two grids and sheets to identify the spaces they choose and show their work the goal of the game is to sink all of the opponent's ships by correctly guessing

play advanced battleship game math is fun - Aug 03 2022

web advanced battleship game try battleship game html5 version games index puzzle games elementary games number games strategy games

battleship coordinate grid game teach starter - Oct 05 2022

web solve real world and mathematical problems by graphing points in all four quadrants of the coordinate plane include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate grade 6 standards for mathematical practice the number system

strategy ships math playground - Nov 06 2022

web play strategy ships at math playground can you locate your opponent's ships before the computer locates yours advertisement kindergarten 1st grade 2nd grade 3rd grade 4th grade 5th grade more math games to play math playground 1st grade games 2nd grade games 3rd grade games 4th grade games 5th grade games 6th

battling ships game year 5 maths teacher made twinkl - Apr 30 2022

web students can have heaps of fun learning about grid coordinates with this battling ships game those who are familiar with this classic game will have fun guessing where their opponent's ships are this game includes a set of instructions grids to play on ship playing pieces and teachers notes

battleship play battleship at hoodamath - Jul 02 2022

web the best free battleship online no downloads required play immediately for free more than 1000 games no pop ups nothing to install

online battleship game with coordinates gameita - Dec 27 2021

web apr 7 2023 games online battleship game with coordinates april 7 2023 online battleship game with coordinates coordinate graphing plotting points battleship math game please rotate your device here this is the classic game of the warship and we will use it to improve our coordinate skills

coordinate battleship all four quadrants interactive maths - Jul 14 2023

web the classic game of battleship in all four quadrants of a coordinate grid players must identify the coordinates of their enemies boats interactive maths the interactive way to teach mathematics

play battleship game math is fun - Mar 30 2022

web battleship game sink the enemy ships before they sink you drag to place drag outside to rotate games index puzzle games elementary games number games strategy games

math games for kids co ordinates battleship game childhood101 - Jan 08 2023

web this co ordinates battleship math game is a super fun way to revise geometry learning about co ordinates students play in pairs and to play they plot their fleet of ships onto the printable grid and then use dice to determine the co

battleships coordinates game ks3 ks4 maths beyond twinkl - May 12 2023

web get involved in a fun classroom based take on classic board games with a fun battleships coordinates game that integrates use of the four quadrants integrate effective learning with an exciting activity in this coordinates game

battleship in the coordinate plane geogebra - Jun 13 2023

web this game is played just like the old milton bradley game battleship yet here we ll be playing within the context of the coordinate plane the goal is to to sink all 5 of your opponent s ships before he she sinks all 5 of yours

battleship game with coordinates battleship grid twinkl - Sep 04 2022

web children will love this interactive battleship game with coordinates complete with exciting illustrations of pirates the game uses the traditional concept of the game battleship to support children in identifying letters and numbers as well as their ability to follow simple instructions from their opponent including both a my ships and

coordinate battleships differentiated for la ma ha ideal for - Feb 26 2022

web feb 22 2018 coordinate battleships differentiated for la ma ha brilliant mathematical thinking game good resource to use to teach coordinates 3 versions available la ma ha for more click here a

interactive battleship game with coordinates teacher made - Mar 10 2023

web this interactive battleships game with coordinates will help kids to understand the relationships between an object and sequence of events shown on a graph as well as the relationships between the rows and columns and how they can be represented

printable battleship template maths game pdf twinkl - Feb 09 2023

web get your cannonballs at the ready and prepare for battle with this brilliantly fun battleship template this great battleship template lets children have fun in maths lessons while also being able to practise using cartesian coordinates it s fun and educational what more could you want the template is easy to download and print

[coordinate battleships maths games suitable for key stage 2](#) - Jun 01 2022

web battleships on the grid see below for examples take it in turns to ask co ordinate points to try and find where your opponent has hidden their battleships the other player must say if it is a hit or a miss this can be recorded on the enemy s map the winner is the first person to destroy the other one s fleet ahoy x x x small

battleship template maths games teacher made twinkl - Apr 11 2023

web a fun and educational game to play in maths lesson get your cannonballs at the ready and prepare for battle with this brilliantly fun battleship template show more related searches battleships cartesian plane battleships grid game battleships coordinates battle ships cartesian plane powerpoint ratings reviews curriculum links make a request

battleship cartesian coordinates geogebra - Aug 15 2023

web based on the classic battleship board game this applet allows you to practice using cartesian coordinates while playing against a computerized opponent the goal is to sink all of your opponent s ships before your fleet is destroyed

battleships coordinates game teaching resources - Dec 07 2022

web feb 22 2018 i use this as a fun game to help embed the reading and plotting of coordinates with a mixed ks2 class the children will need a 10x10 grid instruct them to place as many ships as you want on the grid i have mixed the coordinates where the missiles hit as best as possible play it through until there is a winner

panhard *wikipédia* - Sep 19 2023

web la saga panhard documentaire histoire automobile de bernard saint jacques youtube consulté le 14 8 2022 panhard ses voitures d après guerre par bernard vermaylen éditions e t a i 1995 isbn 2 7268 8196 3 les panhard et levassor une aventure collective par claude alain sarre éd e t a i 2000 isbn 978 2726885277

panhard tous les modèles après 1945 auto forever - Jun 16 2023

web panhard est un des premiers constructeurs français d automobile qui démarra son activité en 1890 sous l impulsion de deux hommes rené panhard et Émile levassor leur société s appelle panhard levassor le nom panhard s impose comme la marque des automobiles produites après la seconde guerre mondiale

auto geschichte panhard autozeitung de - Jan 31 2022

web dec 1 2012 rené panhard schuf 1890 zusammen mit Émile levassor das erste französische auto und begann als erster überhaupt mit der serienproduktion von fahrzeugen die historie panhard panhard levassor setzten als erste konstruktore auf die klassische kombination frontmotor und heckantrieb

panhard dyna x 1947 1953 histoire de l automobile - Mar 01 2022

web sep 28 2023 au milieu des années 1940 le constructeur automobile panhard s associe à l ingénieur français jean albert grégoire pour réaliser une voiture en aluminium qui s avère plus léger que l acier classique ainsi la dyna x est présentée en 1946 au salon de l automobile de paris 1946

historique de la marque les doyennes de panhard levassor - Aug 06 2022

web une succession réussie de mises au point difficiles et d essais sur route décida rené panhard et emile levassor à commencer la fabrication et la vente des premières automobiles de série au monde en octobre 1891

de 1890 à 1940 panhard concept historique - May 15 2023

web cinq voitures sont vendues la première année en 1891 en contact étroit avec armand peugeot panhard levassor lui fourni des moteurs en v daimler de 1890 à 1896 le 11 septembre 1890 levassor écrit à gottlieb daimler en lui demandant de venir à paris pour voir la voiture à quatre places qu il venait de mettre au point et le

voitures panhard livres histoire modèles et technique tmb - Jul 05 2022

web oct 7 2023 découvrez ici les ouvrages sur l histoire les modèles et la technique des voitures panhard panhard levassor pionnier de l industrie automobile de bernard vermeulen philippe krebs auteur

autohistoire episode 5 panhard 24 la fin d une lignée - Nov 09 2022

web dans ce cinquième numéro d autohistoire je vais vous parler de la panhard 24 la dernière panhard civile timecode 00 16 d où vient panhard 02 48 Étu

la saga panhard documentaire histoire automobile de bernard youtube - Mar 13 2023

web feb 27 2021 la saga panhard documentaire histoire automobile de bernard saint jacques transcript follow along using the transcript show transcript panhard

panhard wikiwand - Jan 11 2023

web panhard levassor est le constructeur automobile français le plus ancien surnommé la doyenne des marques créée en 1891 dont l activité civile a été arrêtée en 1967 après sa reprise par citroën l entreprise poursuit la production des véhicules militaires essentiellement des blindés légers 4 4 produits en france dans deux usines à

panhard wikipedia - Jun 04 2022

web panhard on ranskalainen sotilasajoneuvojen valmistaja panhard oli myös vuosina 1890 1967 valmistettu ranskalainen henkilöautomerkki panhard auton sarjatuotanto aloitettiin 1891 siinä käytettiin moottori edessä ja veto takana koria johon useimmat autotehtaat siirtyivät myöhemmin

panhard de historie van een eigenzinnig automerk peter breed - Dec 10 2022

web een merk met historie de firma panhard behoorde niet alleen tot de oudste automobielen producten van de wereld maar ook tot de origineelste ze bouwden zowel grote als kleine auto s sport en racewagens maar ook grote luxe sleeën eventueel met schuivenmotoren

panhard 130 ans d histoire de l automobile à l honneur aux - Oct 08 2022

web jun 27 2021 s abonner en 1891 panhard produisait trente voitures en série une date qui marque le début de l histoire de l industrie automobile et que célèbrent les classic days ce dimanche 27 juin

panhard wikipedia - Jul 17 2023

web panhard was originally called panhard et levassor and was established as an automobile manufacturing concern by rené

panhard Émile levassor and belgian lawyer edouard sarazin in 1887 early years panhard et levassor sold their first automobile in 1890 based on a daimler engine license

[panhard concept historique connaitre panhard](#) - Aug 18 2023

web doyen mondial des marques automobiles 1891 1967 découvrez sa riche histoire dans les domaines civils militaires et sportifs et son empreinte dans le sport automobile elle fût précurseur et expérimentateur de techniques de mobilité

panhard levassor encyclopædia universalis - Feb 12 2023

web société française de construction d automobiles panhard levassor qui doit son nom à ses deux associés rené panhard 1841 1908 et Émile levassor 1843 1897 a marqué les débuts de l industrie automobile fondée en 1886 cette marque est passée sous le contrôle total de citroën en

voitures panhard thelonggame - Apr 02 2022

web aug 28 2023 histoire de panhard panhard est une entreprise automobile française qui a joué un rôle clé dans l histoire de l industrie automobile fondée en 1889 par rené panhard et Émile levassor elle est l une des plus anciennes marques de voitures encore en activité aujourd hui

panhard 178 wikipédia - Sep 07 2022

web la panhard 178 est une automitrailleuse fabriquée par la société panhard destinée à la reconnaissance blindée et utilisée pendant la seconde guerre mondiale l histoire de l automitrailleuse de découverte panhard 178 remonte au début des années 1930 avec la création de la panhard 165 175

[panhard pl17 histoire et modèles de 1959 à 1965 youtube](#) - May 03 2022

web jan 4 2023 découvrez la vie et la mort de cette fabuleuse voiture qui est la panhard pl17 devenue 17b par la suite je passe en revue les modèles les changements durant sa vie de 1959 à 1965

an illustrated history of panhard the truth about cars - Apr 14 2023

web aug 23 2010 panhard et levassor was established in 1887 and built its first car in 1891 based on a license of the daimler patent but instead of the rear engine that the first daimler and benz cars used panhard placed the engine and radiator at the front with rear driven wheels and a crude sliding gear transmission