



Modlin

AI-Powered Adaptive Personalized Learning Platform



Inquiries: david@modlinedu.com | +27 828598743

Modlin: Unleashing the Power of Mathematics and Science through AI

Modlin offers a comprehensive online platform dedicated to making mathematics education more accessible, engaging, and effective. Our platform offers a wide range of interactive digital tools and resources that cater to diverse learning styles and needs, helping students of all ages and skill levels build confidence and competence in math.

From basic arithmetic operations to advanced calculus and statistics, our platform provides a personalized learning experience that adapts to each user's pace and understanding. Real-time feedback and assessments allow users to track their progress, identify areas for improvement, and reinforce their knowledge through targeted practice exercises and games. Additionally, our platform includes a wealth of multimedia content, such as videos, animations, and interactive simulations, which help to visualize complex mathematical concepts and make them more tangible and easier to understand.

By leveraging technology and innovative teaching methods, Modlin aims to empower students and educators alike, fostering a deeper appreciation and understanding of mathematics that will serve them well throughout their academic and professional careers.

Who is David Modlin?

David Modlin is a seasoned entrepreneur and educator with nearly three decades of experience in publishing and education technology. As the founder and CEO of Modlin Education, he has built a reputation for creating high-quality dictionaries, books, e-learning content, and software that cater to the diverse needs of students, educators, and professionals worldwide.

Modlin's company has made a significant impact in the education sector, with over 20,000 schools, institutions, and companies adopting his content. His dedication to innovation and excellence has also led to the development of a popular app available on the Google App Store.

Through his leadership and vision, Modlin continues to set new standards in the edtech industry, providing learners with the tools and resources they need to succeed in today's fast-paced digital landscape.

Features and Functionality

Personalized Learning - Modlin uses AI-powered adaptive learning and a powerful recommendation engine to provide personalized educational paths for each student, tailoring the content and pace to their individual needs, abilities, and learning style. This allows students to learn math at their own pace and focus on the areas where they need improvement.

Interactive Content - Modlin offers a wide range of interactive content, including animations, videos, quizzes, and games, to engage students and make learning math more enjoyable and effective.

Real-Time Feedback - Modlin's AI-powered algorithms provide real-time feedback and assessment to students, helping them identify areas where they need to improve and giving them a sense of accomplishment when they achieve their learning goals.

Adaptive Difficulty - Modlin's platform adjusts the difficulty level of math problems based on a student's performance, ensuring that they are always challenged appropriately and never feel overwhelmed or bored.

Data Analytics - Modlin collects and analyzes vast amounts of data on student performance, providing teachers and administrators with valuable insights to inform their instructional strategies and decision-making.

Localization - Modlin customizes its platform to cater to state standard curricula and languages, enabling students to learn math in a context that is relevant to their culture and environment.

Continuous Improvement - Modlin continuously updates and refines its platform based on user feedback and behavior data, ensuring that the platform stays relevant and effective in improving math education.

Teacher Support - Modlin provides teachers with comprehensive support, including training, resources, and tools, empowering them to deliver more effective and engaging math instruction.

“No human investigation can be called real science if it cannot be demonstrated mathematically.” – Leonardo Da Vinci

Benefits

For Students:

1. Personalized learning experiences.
2. Increased confidence and motivation.
3. Access to diverse, curated content.
4. Preparedness for higher education and careers.
5. Facilitates a more inclusive and well-rounded classroom experience.
6. Fosters independent learning.

For School/Districts:

1. Elevates educational outcomes.
2. Boosts student engagement and motivation.
3. Enhances institutional reputation and competitiveness.
4. Enables data-driven resource allocation.
5. Frees up time and resources for comprehensive class instruction.

For Teachers:

1. Simplifies lesson planning.
2. Provides data-driven insights.
3. Enables personalized mentoring.
4. Balances individual and group learning.
5. Enhances efficiency in teaching methods.

For Society:

1. Enhances workforce competitiveness.
2. Reduces educational disparities.
3. Fuels societal progress and innovation.
4. Prepares for a changing world.
5. Optimizes resource allocation for broader learning.

Traditional vs Personalized Learning

Aspect	Traditional Learning	Personalized Learning
Instructional approach	One-size-fits-all	Tailored to individual needs & abilities
Pace	Fixed	Variable, self-directed
Content	Standardized curriculum	Flexible, adaptive content
Assessment	Standardized testing	Continuous, formative assessment
Feedback	Limited, delayed	Immediate, actionable
Student role	Passive receiver of information	Active participant in learning process
Learning environment	Physical classroom	Flexible, online or blended
Teacher role	Primary authority figure	Facilitator, coach
Parental involvement	Limited	Encouraged, integrated

Personalized learning offers a number of advantages over traditional learning approaches. By tailoring instruction to individual students' needs, abilities, and interests, personalized learning promotes greater engagement, motivation, and achievement. The flexibility of personalized learning also allows students to work at their own pace and explore topics in depth, rather than being constrained by a rigid curriculum or timeframe. Furthermore, personalized learning environments are often more dynamic and adaptive, incorporating cutting-edge technologies and multimedia resources to enhance the learning experience. Perhaps most importantly, personalized learning shifts the focus from teacher-centered instruction to student-centered discovery, fostering critical thinking, problem-solving, and collaboration skills that are essential for success in today's rapidly changing world. By contrast, traditional learning approaches often rely on standardized curricula, one-size-fits-all instruction, and formulaic assessments, which can leave students disengaged, unchallenged, and ill-prepared for the future.

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“If I were beginning my studies, I would follow the advice of Plato and start with mathematics.” – Galileo Galilei

Example Screenshots



Sign in to Modlin

Sign in using your social media account

GOOGLE

or email

Email

Password

LOG IN

[FORGOT PASSWORD?](#)

Top notch education platform

- Follow your lessons progress
- Get individual practice tests
- Access to learning analytics to measure performance

Not a member yet?

[REGISTER](#)

Login Screen



Welcome back, Daniel

Your courses

11 - Math (CAPS) >>

17%
TOTAL SCORE

Learn
Exponents and surds >

1%
TOTAL COVERAGE

Practice your weakest area
Finding the maximum value >

12 - Math (CAPS) >>

20%
TOTAL SCORE

Learn
Number patterns, including arithmetic and geometric sequences and series >

1%
TOTAL COVERAGE

Practice your weakest area
Arithmetic series, common difference >

Student Homepage

11 - Math (CAPS)

PRACTICE YOUR WEAKEST AREAS START TEST >> Simplification of surds using the laws and including multiplication

NEXT LESSON START LESSON >> Simplification of surds including rationalizing the denominator

Lessons

- Exponents and surds practice go to lesson Equations and inequalities practice go to lesson

Course Homepage

Recommended: Simplification of surds using the laws and including multiplication (10/12/2023 10:12 AM)

TEST TYPE This is a practice test. In a practice test, you will be provided with hints and explanations to any questions during the test. You will be also able to check your answers and view hints and explanations, if any, after the test is completed.

AREAS Simplification of surds using the laws and including multiplication (10)

NUMBER OF QUESTIONS 10

SCORE Your test score would be here. Good luck on your test

AI Generated Test

List of Topics



SORT BY PERFORMANCE

TITLE	SCORE	COVERAGE	TOPIC INFORMATION
Exponents and surds	11%	52%	<p>Exponents and surds</p> <p>11% SCORE 52% COVERAGE</p> <p>RETAKE SKIPPED/INCORRECT QUESTIONS</p> <p>PRACTICE YOUR WEAKEST AREAS</p>
Equations and inequalities	8%	73%	
Number patterns	1%	51%	
Analytical geometry	11%	8%	
Functions	1%	30%	

Course Performance

List of Topics



SORT BY PERFORMANCE

TITLE	SCORE	COVERAGE	TOPIC INFORMATION
Exponents and surds	11%	52%	<p>Exponents and surds</p> <p>11% SCORE 52% COVERAGE</p> <p>RETAKE SKIPPED/INCORRECT QUESTIONS</p> <p>PRACTICE YOUR WEAKEST AREAS</p> <p>GO TO LESSON</p> <p>Tests that cover questions from this area</p> <p>PRACTICE Recommended: Simplification of surds using the laws and including multiplication (10/12/2023 10:12 AM) 10</p> <p>PRACTICE Recommended: Simplification of surds including addition, multiplication and fractions (8/24/2023 1:43 PM) 5</p>
Equations and inequalities	8%	73%	
Complete the square	10%	68%	
Finding the maximum value	N/A	0%	
Writing the expression in the form $a(x - p)^2 + q$	0%	50%	
Maximum value and completing the square	100%	20%	
When x is zero and completing the square	0%	100%	
When x is undefined and completing the square	0%	100%	
Minimum value and completing the square	0%	100%	
Adding a term to make a perfect square	0%	75%	
Determining the maximum or minimum value	0%	38%	
Finding the value of x at which a maximum or minimum occurs	0%	60%	
Proving a maximum or minimum value	N/A	N/A	
Domain and range and completing the square	0%	100%	
Solving quadratic equations by factorisation and by using the quadratic formula	0%	63%	

Course Performance with Skill Drill Down

General information

Title

Description

Add questions i

Added questions: 16/50

TITLE	#OF QUESTIONS AVAILABLE	#OF QUESTIONS ADDED
<input checked="" type="checkbox"/> Exponents and surds	926	0
<input checked="" type="checkbox"/> Simplify expressions and solve equations using the laws of exponents for rational exponents	461	1
<input type="checkbox"/> Add, subtract, multiply and divide simple surds	216	0
<input type="checkbox"/> Solve simple equations involving surds	248	1
<input checked="" type="checkbox"/> Equations and inequalities	208	0
<input type="checkbox"/> Complete the square	31	13
<input type="checkbox"/> Solving quadratic equations by factorisation and by using the quadratic formula	76	0

Test Builder

CREATE TEST

- TEST GROUP**
- ASSIGNED
 - PREMADE
 - MY TESTS
- TEST TYPE**
- DIAGNOSTIC
 - PRACTICE
 - PAPER BASED
- VIEW**
- COMPLETED
 - INCOMPLETED

PRACTICE

Recommended: Exponents and surds (2/7/2021 4:23 PM)

10

PRACTICE

Recommended: Exponents and surds (12/29/2020 3:25 PM)

10

PRACTICE

Skipped and Incorrect: Exponents and surds (11/5/2020 1:11:03 PM)

10

PRACTICE

Recommended: Equation with exponent as base (10/28/2019 10:58 AM)

6

PRACTICE

Recommended: Solution of exponential surd equation (5/30/2018 10:34 AM)

4

PRACTICE

Recommended: Equation with exponent as base (4/5/2018 7:44 AM)

6

Course Test Center

- > Exponents and surds
- ▼ Equations and inequalities
 - ▼ Complete the square
 - Writing the expression in the form $a(x - p)^2 + q$
 - Determining the maximum or minimum value
 - > Solving quadratic equations by factorisation and by using the quadratic...
 - > Quadratic inequalities in one unknown
 - > Equations in two unknowns, one of which is linear and the other quadratic
 - > Nature of roots
- > Number patterns
- > Analytical geometry
- > Functions

Completing the square

Can you solve each equation using two different methods?

$$x^2 - 4 = 0$$

$$x^2 - 8 = 0$$

$$x^2 - 4x + 4 = 0$$

$$x^2 - 4x - 4 = 0$$

Factorising the last equation is quite difficult. Use the previous examples as a hint and try to create a difference of two squares.

We have seen that expressions of the form $x^2 - b^2$ are known as differences of squares and can be factorised as $(x - b)(x + b)$.

This simple factorisation leads to another technique for solving quadratic equations known as completing the square.

Consider the equation $x^2 - 2x - 1 = 0$.

We cannot easily factorise this expression.

When we expand the perfect square $(x - 1)^2$ and examine the terms we see that

$$(x - 1)^2 = x^2 - 2x + 1.$$

Comprehensive Lesson Plans



Find the maximum value of $-5x^2 - 10x + 2$ by completing the square.

Maximum value is

if $x =$

Leave NO spaces when answering.

Practice Tests with Built-In Lessons and Step-by-Step Solutions