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|  | [**MATLAB**](https://www.mathworks.com/products/matlab)  **Prerequisite for all other products** | USD 149.00 |  |

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| Math, Statistics, and Optimization | | | |
|  | [**Symbolic Math Toolbox**](https://www.mathworks.com/products/symbolic) | USD 45.00 |  |
|  | **Capabilities**  [**Integration, Differentiation, and Other Calculus**](https://www.mathworks.com/products/symbolic/features.html#integration%252C-differentiation%252C-and-other-calculus)  Define and perform operations on symbolic numbers, variables, expressions, and equations with the output rendered in mathematical typeset.  [**Simplification, Substitution, and Solving**](https://www.mathworks.com/products/symbolic/features.html#simplification%252C-substitution%252C-and-solving)  Manipulate and simplify expressions through simplification, expansion, factorization, and rewriting expressions in specific terms.  [**Linear Algebra**](https://www.mathworks.com/products/symbolic/features.html#linear-algebra)  Solve systems of linear equations. You can perform analytical vector and matrix computations.  [**Plotting Analytical Functions**](https://www.mathworks.com/products/symbolic/features.html#plotting-analytical-functions)  Expand MATLAB graphics by providing 2D and 3D plotting functions for symbolic expressions and equations.  [**Variable-Precision Arithmetic**](https://www.mathworks.com/products/symbolic/features.html#variable-precision-arithmetic)  Set the number of significant digits used in your computations and maintain that accuracy throughout your computations.  [**Interactive Computations in the MATLAB Live Editor**](https://www.mathworks.com/products/symbolic/features.html#interactive-computations-in-the-matlab-live-editor)  Explore and rapidly develop mathematical models and algorithms.  [**Generating Code for MATLAB, Simulink, and Simscape**](https://www.mathworks.com/products/symbolic/features.html#generating-code-for-matlab%252C-simulink%252C-and-simscape)  Generate code for MATLAB functions, MATLAB function blocks for use in Simulink models, and custom equation based components for use in Simscape. |  |  |
|  | [**Partial Differential Equation Toolbox**](https://www.mathworks.com/products/pde) | USD 45.00 |  |
|  | **Solve partial differential equations using finite element analysis**  Partial Differential Equation Toolbox™ provides functions for solving partial differential equations (PDEs) in 2D, 3D, and time using finite element analysis. It lets you specify and mesh 2D and 3D geometries and formulate boundary conditions and equations. You can solve static, time-domain, frequency-domain, and eigenvalue problems over the domain of the geometry. Functions for postprocessing and plotting results enable you to visually explore the solution.  You can use Partial Differential Equation Toolbox to solve PDEs from standard problems such as diffusion, heat transfer, structural mechanics, electrostatics, magnetostatics, and AC power electromagnetics, as well as custom, coupled systems of PDEs. |  |  |
|  | [**Statistics and Machine Learning Toolbox**](https://www.mathworks.com/products/statistics) | USD 45.00 |  |
|  | **Analyze and model data using statistics and machine learning**  Statistics and Machine Learning Toolbox™ provides functions and [apps](https://www.mathworks.com/products/statistics/apps.html) to describe, analyze, and model data. You can use descriptive statistics and plots for exploratory data analysis, fit probability distributions to data, generate random numbers for Monte Carlo simulations, and perform hypothesis tests. Regression and classification algorithms let you draw inferences from data and build predictive models.  For multidimensional data analysis, Statistics and Machine Learning Toolbox provides feature selection, stepwise regression, principal component analysis (PCA), regularization, and other dimensionality reduction methods that let you identify variables or features that impact your model. The toolbox provides supervised and unsupervised machine learning algorithms, including support vector machines (SVMs), boosted and bagged decision trees, k-nearest neighbor, k-means, k-medoids, hierarchical clustering, Gaussian mixture models, and hidden Markov models. Many of the statistics and machine learning algorithms can be used for computations on data sets that are too big to be stored inCapabilities [**Exploratory Data Analysis**](https://www.mathworks.com/products/statistics/features.html#exploratory-data-analysis)  Explore data through statistical plotting with interactive graphics, algorithms for cluster analysis, and descriptive statistics for large data sets.  [**Dimensionality Reduction**](https://www.mathworks.com/products/statistics/features.html#dimensionality-reduction)  Model a continuous response variable as a function of one or more predictors.  [**Machine Learning**](https://www.mathworks.com/products/statistics/features.html#machine-learning)  Use algorithms that "learn" information directly from data without assuming a predetermined equation as a model.  [**Regression and ANOVA**](https://www.mathworks.com/products/statistics/features.html#regression-and-anova)  Use algorithms and functions to analyze multiple variables.  [**Probability Distributions**](https://www.mathworks.com/products/statistics/features.html#probability-distributions)  Work with parametric and nonparametric probability distributions.  [**Hypothesis Testing, DOE, and Statistical Process Control**](https://www.mathworks.com/products/statistics/features.html#hypothesis-testing%252C-doe%252C-and-statistical-process-control)  Run statistical computations in parallel to gain speed and to reduce the execution time of your program or functions. |  |  |
|  | [**Curve Fitting Toolbox**](https://www.mathworks.com/products/curvefitting) | USD 45.00 |  |
|  | **Fit curves and surfaces to data using regression, interpolation, and smoothing**  Curve Fitting Toolbox™ [provides an app](https://www.mathworks.com/products/curvefitting/apps.html) and functions for fitting curves and surfaces to data. The toolbox lets you perform exploratory data analysis, preprocess and post-process data, compare candidate models, and remove outliers. You can conduct regression analysis using the library of linear and nonlinear models provided or specify your own custom equations.  The library provides optimized solver parameters and starting conditions to improve the quality of your fits. The toolbox also supports nonparametric modeling techniques, such as splines, interpolation, and smoothing.  After creating a fit, you can apply a variety of post-processing methods for plotting, interpolation, and extrapolation; estimating confidence intervals; and calculating integrals and derivatives. |  |  |
|  | [**Optimization Toolbox**](https://www.mathworks.com/products/optimization) | USD 45.00 |  |
|  | **Solve linear, quadratic, integer, and nonlinear optimization problems**  Optimization Toolbox™ provides functions for finding parameters that minimize or maximize objectives while satisfying constraints. The toolbox includes solvers for linear programming, mixed-integer linear programming, quadratic programming, nonlinear optimization, and nonlinear least squares. You can use these solvers to find optimal solutions to continuous and discrete problems, perform tradeoff analyses, and incorporate optimization methods into algorithms and applications.  [**Linear and Quadratic Programming**](https://www.mathworks.com/products/optimization/features.html#linear-and-quadratic-programming)  Solve large-scale linear and quadratic programming problems  [**Mixed-Integer Linear Programming**](https://www.mathworks.com/products/optimization/features.html#mixed-integer-linear-programming)  Solve mixed-integer linear programming problems.  [**Multi objective Optimization**](https://www.mathworks.com/products/optimization/features.html#multiobjective-optimization)  Solve two formulations of multi objective optimization problems.  [**Nonlinear Least Squares, Data Fitting, and Nonlinear Equations**](https://www.mathworks.com/products/optimization/features.html#nonlinear-least-squares%252C-data-fitting%252C-and-nonlinear-equations)  Solve linear and nonlinear least-squares problems, data fittingproblems, and nonlinear equations. |  |  |