PTC® Mathcad®

YOUR SINGLE SOURCE FOR ENGINEERING CALCULATIONS

PTC Mathcad

Solve, Document, Share, and Reuse Your Engineering Calculations

In the quest for engineering excellence, companies invest heavily in technology for detailed design development and prototype testing. Yet they often neglect one of the most essential ingredients of all: engineering calculations.

These calculations predict the behavior of designs early in the product development process, and they drive critical parameters and dimensions. Without accurate, reproducible, and readable calculations, you lose time and valuable intellectual property.

With PTC Mathcad, you can easily perform, document, and share your calculations and design work. Its simple interface, live natural math notation, powerful capabilities, and open architecture streamline critical design processes. Calculations, text, and images appear in an understandable format, enabling knowledge capture, data reuse, and design verification. The integration of calculation work into existing engineering processes and applications results in products that get to market faster, have improved quality, and are more successful in satisfying regulatory compliances.

Key Benefits

PTC Mathcad delivers a wealth of benefits to every major stakeholder in the engineering organization. For senior management, PTC Mathcad ensures maximum team productivity, helping deliver better products more quickly at a lower cost while protecting intellectual property. PTC Mathcad helps engineers more efficiently perform all phases of their work, reducing errors, increasing collaboration with colleagues, and encouraging greater reuse of approved calculations in future projects.

- **Intuitive:** The interface is not only simple to learn, but also leverages standard math notation so your work can be easily read, understood, shared, and reused by others.

- **Comprehensive:** PTC Mathcad combines text, live math, graphics, and annotations in a single worksheet. Its unmatched breadth of application, including powerful mathematics functionality and unit awareness, provides all the capabilities you need in one comprehensive application.

- **Interoperable:** PTC Mathcad easily integrates with PTC Creo® and PTC Windchill®, as well as other engineering applications, enhancing your results as you leverage tools and data from outside applications.

- **Scalable:** PTC Mathcad's power and reach extends to desktops and across the enterprise. Capture standard calculations just once and distribute them to the entire team in the form of templates to save time on frequently repeated formulas. Best of all, anyone who finds a better approach can quickly update the worksheet and share it back with the team—so you harness the intellectual power of your whole team efficiently.
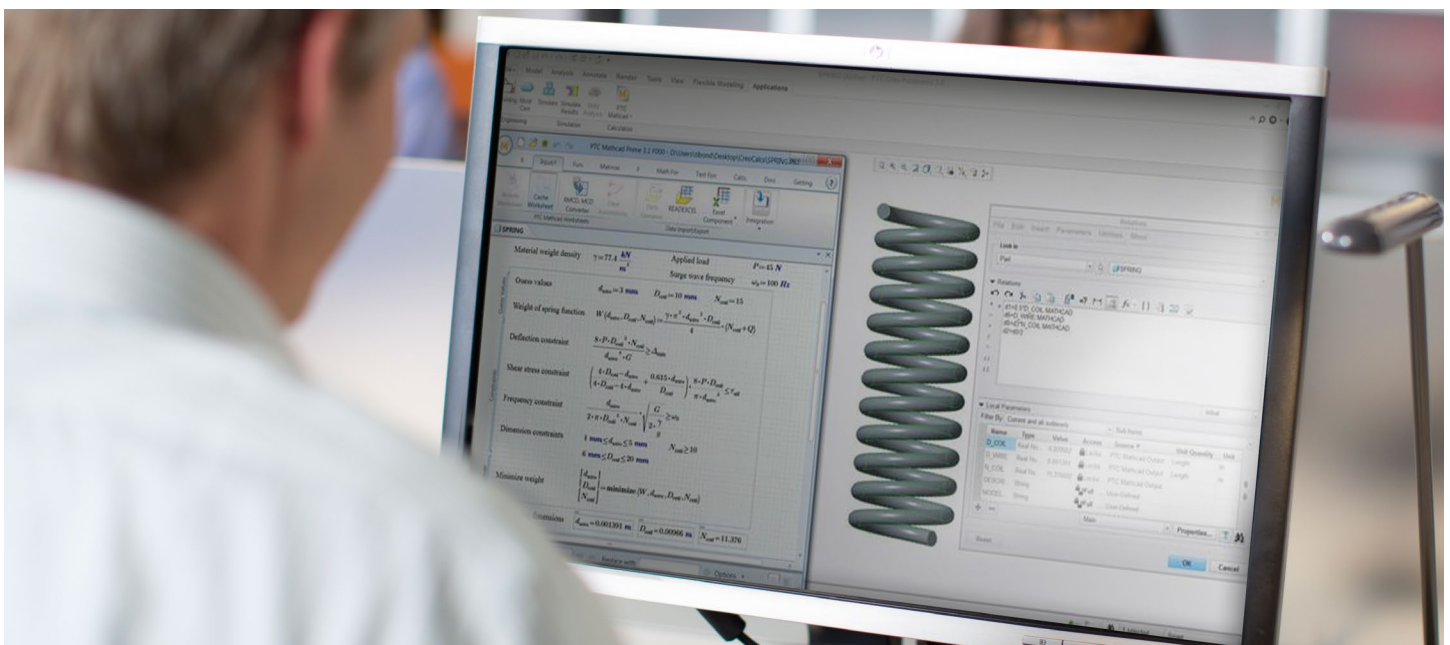
PTC Mathcad — by the Numbers

Any way you add it up, PTC Mathcad stands alone when it comes to functionality, performance, and ease-of-use. That's why it's the single solution for engineering calculations.

500+ pre-built worksheets available for download.

700+ built-in engineering calculation functions, plus automated units management.

250,000+ engineers worldwide choose PTC Mathcad because it combines text, live math, and graphics in a single worksheet.

Comprehensive Capabilities

Power and Ease of Use, All in One

PTC Mathcad is an engineering notebook that you can use to quickly create, document, share, and reuse critical calculations. Unlike other solutions, PTC Mathcad presents calculations in a readable and reusable worksheet format, which reduces costly, time-consuming errors and redesigns while promoting true engineering collaboration.

Intuitive Calculations

The PTC Mathcad interface combines live, standard mathematical notation with text and graphs:

- Live calculations appear within worksheets

- A single worksheet can also display text, graphs, and data

- Integrated numeric and symbolic math allows you to see both the calculation as well as the reasoning behind designs

- Units are managed intelligently and automatically

- Engineering calculations—standard and proprietary— are easily iterated, audited, shared, and reused

Capture and Share Valuable Engineering Knowledge

Every industry generates a wealth of valuable engineering calculation data, including specifications, formulas, diagrams, and test results. Accurate and timely information speeds products to market, reduces costs, and lowers the risk of design failure.

Unfortunately, this information too often is hidden, hard to find (e.g., in filing cabinets, in notebooks, in computer code), or never captured at all.
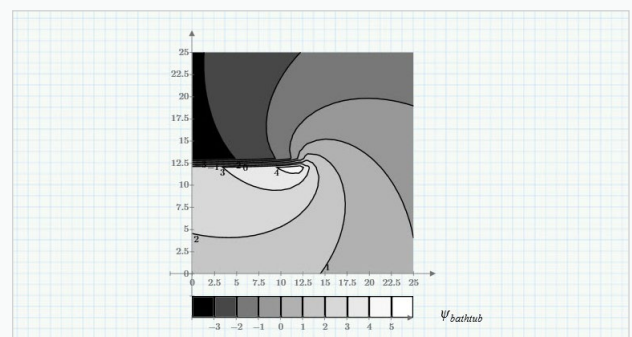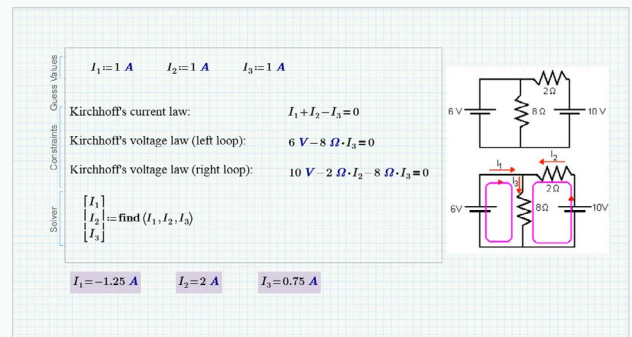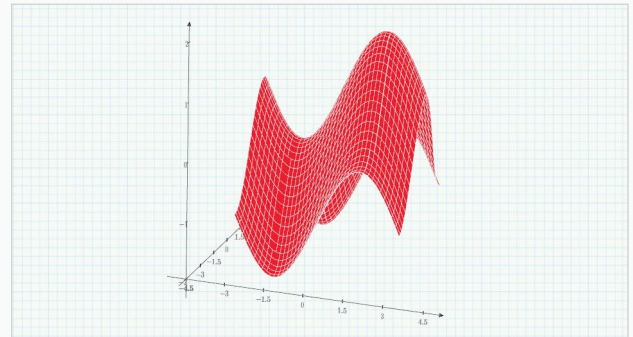
PTC Mathcad's flexible formatting makes your intellectual property more discoverable and usable:

- Produce your formulas in worksheets that also include the code, concepts, and implementation associated with your work

- Successfully capture valuable engineering calculation information all in one place

Extensive Organizational Collaboration

PTC Mathcad expresses calculations in standard math notation, so anyone can read and understand the work. Plus, its XML format allows for automated publishing in

Capture all text, live math, and graphics needed to clearly communicate the assumptions, equations, and results of critical engineering calculations.

downstream documents so you can produce clear documentation of all methods, equations, and assumptions. This creates traceability between customer requirements, calculations, and design geometry.
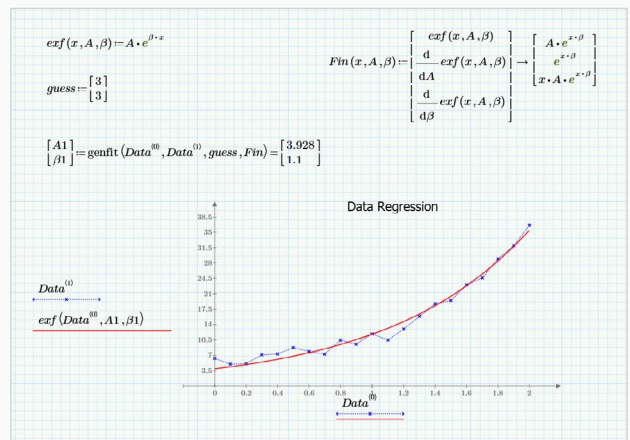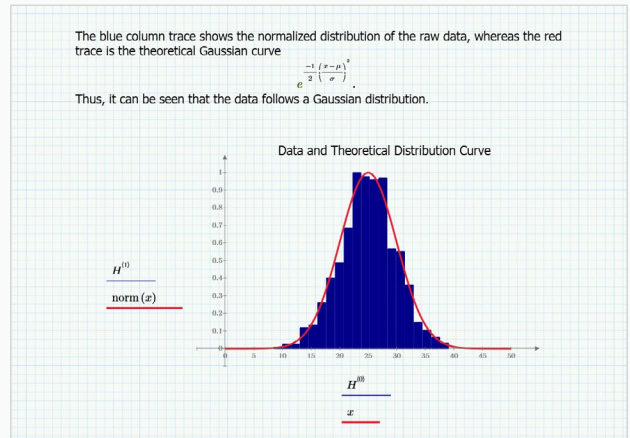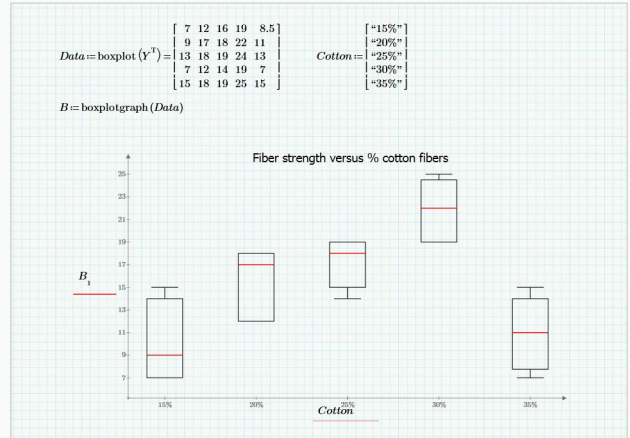
Systems Engineering Workflow

Within PTC Mathcad, you can capture product and system requirements, decompose those requirements into their functional areas, support detailed design and analysis, and provide an intuitive environment for design verification and validation.

Productivity-Enhancing Integration

PTC Mathcad, with its open architecture, integrates seamlessly with PTC Creo, the market-leading integrated 3D CAD/CAM/ CAE solution. The powerful, bi-directional integration provides unique predictive engineering capabilities. PTC Mathcad serves as your engineering notebook for evaluating the behavior of designs as well as driving parameters and dimensions in PTC Creo CAD models.

Intuitive interface allows engineers to combine text, live math, and graphics in a single worksheet.

Global Support

The PTC Global Support system delivers the team, the tools, and the advanced technology to enhance your productivity with greater speed and ease of use. You will also have access to phone service from a team of experts Monday through Friday, 24/7 online web support, and PTC Mathcad tech tips and demonstrations. Take advantage of ongoing PTC Mathcad upgrades, productivity enhancements, service pack releases, and a FREE membership to the Gold Loyalty Program, which provides exclusive discounts with DELL™, 3DConnexion™, and more. Additional services include access to local instructor lead classes, as well as eLearning through PTC University Learning Exchange.

Transforming Engineering with PTC Mathcad

Process improvement is pivotal to product development, and ultimately leads to business success. PTC has a comprehensive point of view of product development. We recognize that product development is a set of highly cross functional and distributed processes that span the life of any product, from planning through support. PTC Mathcad can help optimize a host of product development processes, including:

- Requirements capture and management

- Concept development

- System design

- Detailed design

- Verification and validation

TO LEARN MORE about PTC Mathcad, please visit: PTC.com/product/mathcad

PTC ®

PRODUCT & SERVICE ADVANTAGE®

We provide technology solutions that transform
how customers create, operate, and service products