

Question Types in WebAssign

Name of Resource (naming convention)	What it is	Purpose/When to Use
Quick Prep (.QP)	Questions that review prerequisites	Address readiness gaps <i>*Availability varies by product</i>
Just-in-Time (.JIT)	Exercises that review prerequisites within the context of the new concept	Address readiness gaps <i>*Availability varies by product</i>
Master It (.MI)	Exercises that include stepped-out tutorials as a resource to the question	Develop conceptual understanding
Video Example (.VE)	Questions that integrate a video example	Develop conceptual understanding
Extra Problems (.XP)	Questions that were in prior editions of the text and in WebAssign that, though not in the latest edition of the text, continue to be available in WebAssign.	Supplement assignments with additional content.
Tutorial Questions (.TUT)	Author-agnostic questions that feature a multi-step tutorial guiding students to a deeper understanding of the skills and concept	Develop conceptual understanding and supplement assignments with additional content.
Expanded Problems (.EP)	Reveal student thinking and help them demonstrate their work by filling in the steps in the problem-solving process.	Develop conceptual understanding

Note: The variety of problem types come directly from each text. Read It, Watch It, Master It, and Master It "Standalone" support helps students learn.

Course-specific

Developmental Math

Name of Resource	What it is	Purpose/When to Use
Introductory and Intermediate Algebra Tutorial Bank (in Free Additional Resources)	Features over 1500 questions that cover the full algebra curriculum	Develop conceptual understanding and supplement assignments with additional content. Many instructors like to use these to review prerequisite skills.
Concept Check (.CC)	Questions that provide students with short, multi-step videos, requiring answers to a question after each video, to help confirm understanding of math concepts.	Develop conceptual understanding and supplement assignments with additional content. Many instructors will like to use these to review prerequisite skills.

Precalculus/Calculus

Name of Resource	What it is	Purpose/When to Use
Precalculus Diagnostic (in Free Additional Resources)	A 32-question collection of exercises designed to test and/or review a student's readiness for a precalculus course. Each exercise includes a "Watch it" tutorial video and a "Master It" work-in-steps practice problem.	Address readiness gaps
Explore It (.EI)	Interactive learning module in which students learn a concept, watch a video, explore and test the concept, and (in calculus EIs) discover when they would use it.	Develop conceptual understanding

Statistics

Name of Resource	What it is	Purpose/When to Use
Stats in Practice (.SIP)	Show students how Statistics applies in the real world. Short and current news videos introduce each module. Each video is accompanied by multiple-choice and discussion questions, so that students can understand real-world context of what they're learning and stay engaged throughout the whole module.	At the start of the chapter, introduce the topic with a real world example. Use in class or online.
JMP Simulations (.JMP)	Have your students understand concepts by utilizing real data. Students must discover the answer to guided questions by interacting with a simulation of real data in our JMP interactive applet within WebAssign.	Helps students visualize data and concepts, going beyond computation.
Projects (.PJT)	Allow one place for students to ideate, collaborate, and submit a longer-term project.	Broken up into four milestones to allow students to complete a semester long project.
Labs (.LAB)	Students can perform real statistical analysis in class or online with premade and module-specific Stats Labs. Require students to use the instructor-selected data analysis tool to analyze a real data set, pulling together knowledge learned from that module and previous material to facilitate whole-picture learning.	Use in each section to allow students to get hands on with real data with a given scenario. Designed for the data analysis tool of your choice (Excel, Graphic Calculator, R, SPSS, JMP, MiniTab)
Concept Questions (.CQ)	Provide a new way of engaging with non-computational questions. Students enter a free response before they choose a multiple-choice answer, closing the gap between homework and test preparedness.	Help students prepare before the test by having them analyze their own thinking.

Advanced Math

Name of Resource	What it is	Purpose/When to Use
Linear Algebra Tutorial Bank (in Free Additional Resources)	Features more than 120 tutorial questions that have algorithmically stepped-out solutions, covering the full linear algebra course.	Develop conceptual understanding and supplement assignments with additional content.
Differential Equations Tutorial Bank (in Free Additional Resources)	Features 100 tutorial questions that have algorithmically stepped-out solutions, covering the full differential equations curriculum.	Develop conceptual understanding and supplement assignments with additional content.

Physics

Name of Resource	What it is	Purpose/When to Use
Optimized Problems	Optimized problems feature comprehensive written solutions, numerical and contextual variation to offer randomized parameters, and targeted feedback to students who have incorrectly answered the problem.	Reduces cheating while providing students with a contextual autonomous learning experience to learn from mistakes and enhance problem solving abilities. Optimized problems are not in print, thus protected from "solution providers" and will be augmented every year with updates to the targeted feedback based on actual student answers.
Interactive Video Vignettes (.IVV)	Videos and interactive tutorials address common misconceptions and learning difficulties identified by PER (Physics Education Research).	Interactive Video Vignette questions encourage students to confront their misconceptions on key topics outside the classroom.
Life Science Problems (.bio)	Life Science Problems feature two new life science problems per chapter that highlight the relevance of physics principles.	Their inclusion is to specifically assist the students who are on a life science track – providing a more relevant and authentic experience for that audience.
Context-Rich Problems (.ctx)	Context-rich problems may relate to the opening story line of the chapter, involve "expert witness" scenarios and allow students to go beyond mathematical manipulation by designing an argument based on mathematical results—or ask for decisions to be made in real situations.	Helping students make a personal connection, problems always talk in terms of "you" and have a real-world connection instead of discussing blocks on planes or balls on strings.

Think-Pair-Share Exercises (.TPS)	<p>Think-Pair-Share problems and activities include a solution that is not as straightforward as for a single-concept problem. Some Think-Pair-Share problems require the group to discuss and make decision; others are made more challenging by the fact that some information is not and cannot be known.</p>	<p>Ideal for group discussions and assignments to provoke awareness and interactions through contextual scenarios.</p>
MCAT-Style Passage Problems (.PSG)	<p>30 added modules modeled after the new MCAT exam's "passage problems." Each module starts with a text passage—often with accompanying photos/figures—followed by 5-6 multiple-choice questions.</p>	<p>These question types are designed to offer real world, reason based scenarios to prepare students for situations presented in medical school or within their future medical profession.</p>
What If? Problem Extensions	<p>What If? extensions expand students' understanding of physics concepts beyond the simple act of arriving at a numerical result.</p>	<p>Promote contextual, sequential understanding to Physics concepts by addressing the Why and How as opposed to arriving at a sterile number.</p>
Objective and Conceptual Questions (.OQ and .CQ)	<p>More traditional short-answer and essay-type questions that require students to think conceptually about a physical situation.</p>	<p>Objective and Conceptual questions are used to facilitate students' familiarity with the equations, the variables used, the concepts the variables represent and the relationships between the concepts.</p>
Analysis Model Tutorials (.AMT)	<p>These 165 tutorials strengthen students' problem-solving skills by guiding them step by step through the best process.</p>	<p>Important first steps include making predictions and focusing their strategy on physics concepts before they start to solve the problem quantitatively. A critical component is the selection of an appropriate analysis model to describe what is going on in the problem. Feedback at the end encourages students to think about how the final answer matches their original predictions.</p>
Integrated Tutorials with Case Studies (.IT)	<p>Integrated Tutorials with case studies guide students through the steps in the book's problem-solving process and include meaningful feedback at</p>	<p>This feature promotes conceptual understanding above memorization and helps students understand the</p>

	each step. The feedback addresses student preconceptions and helps them catch algebraic and other mathematical errors. Solutions are carried out symbolically as long as possible, with numerical values substituted at the end.	effects of changing the values of each variable in the problem.
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Astronomy

Name of Resource	What it is	Purpose/When to Use
Virtual Astronomy Labs	VAL incorporates real astronomical data, simulations, and other interactive elements, offering students the opportunity to experience astronomy as a scientist. Targeted feedback guides students in revising any incorrect answers.	Concise interactive tutorials summarize the relevant content and provide a more engaging and effective experience.
Animation Tutorials	Animation Tutorials present rich concepts using animations, interactive figures, or other multimedia elements, and then assess student learning with a variety of item types.	ATs create context for students to visualize and understand Astronomy through a number of media types, while providing assessments to measure success