



The evaluation of questions is based on:

- What was taught in the curriculum
- How it was taught in the curriculum
- What was presented/experienced in practice/homework problems
- What is in the learning guide

It is **NOT** based on:

- How I feel the students will perform
- How the students would evaluate the question

Spectrum of Multiple-Choice Question Types

		Cognitive Variety (Breadth)					
		Definitions	Diagrams	Graphs	Equations (Qualitative)	Problems (Quantitative)	Scenario Problems
Cognitive Complexity (Depth)	Easy (Remembering)	<ul style="list-style-type: none"> • Definitions • Vocabulary • Unit recognition 	Identify definition or variable in a familiar diagram	Definition of slope, area or y-intercept	<ul style="list-style-type: none"> • State the relationship between variables • Identify the units of a variable or equation 	Problems that require the use of 1 equation <u>without</u> variable manipulation	Familiar scenario with previously discussed questions or outcomes
	Medium (Understanding)	Unit identification that requires dimensional analysis or unit justification	Identify one or more concepts in a familiar diagram	<ul style="list-style-type: none"> • Slope or area calculations • x or y-intercept interpretation • Slope or area comparisons 	Qualitatively manipulate variables in a familiar equation	Problems that require the use of 1 equation <u>with</u> variable manipulation	Familiar scenario with new questions or outcomes
	Hard (Applying)		Identify one or more concepts in a unfamiliar diagram	<ul style="list-style-type: none"> • Analyze slope and extend to an equivalent graph • Slope or area calculation used in conjunction with other equations 	Qualitatively manipulate variables in an unfamiliar equation	<ul style="list-style-type: none"> • Problems that require 2 or more equations with or without variable manipulation • Problems that require 2 or more calculations with different equations 	Unfamiliar scenario with previously discussed questions or outcomes or new questions or outcomes