

A matrix for building, self-assessing and peer reviewing local assessment:

<p>Task Difficulty (Complexity, Autonomy, Context)</p> <p>Math Examples</p> <p>Cognitive Demand (Depth and breadth of thinking)</p>	<p>1. <i>Item</i>: no task analysis, strategy, or real performance required: a selected-response or fill-in test item.</p> <p><i>E.g. A multiple-choice item requiring one-step solution.</i></p>	<p>2. <i>Simple script</i>: a routine, constructed-response task involving a familiar script, recipe, or process.</p> <p>(more like the “drill” than the “game”)</p> <p><i>E.g. A familiar and simplified constructed-response problem of 2-3 steps.</i></p>	<p>3. <i>Complex performance</i>: A non-routine, complex task in a realistic context, requiring task analysis, strategy, and autonomy in the use of one’s repertoire, self-assessment, and self-adjustment.</p> <p>(more like the “game” than the “drill”)</p> <p><i>E.g. A complex performance task in which minimal guidance is given about how to approach the task, and in which context matters.</i></p>
<p>A. <i>Recall</i>: Accurate memory of familiar content. E.g. <i>Recall a formula or a definition</i></p>			<p><i>unlikely</i></p>
<p>B. <i>Basic</i>: requires familiar, brief, and uncomplicated thinking, signaled by the way the challenge is scaffolded and worded. E.g. <i>Infer which expression is correct from the options (but the correct choice is obvious and only a very simple ‘plug and chug’ is needed).</i></p>			
<p>C. <i>Understanding</i>: requires higher-order thought about content, strategy, and sequence. However, the challenge is scaffolded so that the thinking required should seem straightforward – i.e. ‘near transfer’ of thought. E.g. <i>A slightly different problem or look than what was done in class: Analyze which math applies, which expression is correct, and perform some testing to determine & check the answer.</i></p>			
<p>D. <i>Complex understanding</i>: the challenge to thinking is significant: minimal or no scaffold is provided, so it is unclear which content and processes should be used, and what to make of ideas and facts that may seem to conflict or to be insufficient. Insight, analysis, and multiple steps of reasoning are needed – i.e. ‘far transfer’ of thought. E.g. <i>A challenging word problem in which the problem seems initially unsolvable from what is given, and a substantial amount of thought and logic are demanded to find a solution path and solve it</i></p>	<p><i>Unlikely</i></p>		

Place the number of total questions and % corresponding to each cell. E.g. There are 8 questions coded A.1 = 23%, 4 questions coded A.2. = 16%, etc. NOTE: coding the cognitive demand and task complexity often requires background knowledge. It requires you to know whether or not the students had studied and gone over with the teacher the questions/tasks on the assessment (or ones just like them). Just reading the assessment by itself might cause a rater other than the teacher to set the level of demand as high when in fact it is a recall question (i.e. the exact question was covered in class).