

## Cognitive Demand

Level	Description	Sample instructions
<b>1</b>	<b>Recall</b> - of fact, definition, term - simple procedure, algorithm or formula - rote response	“identify” “use” “measure”
<b>2</b>	<b>Skill / Concept</b> - some decision making or mental processing required - interpreting information - displaying data in graphs, tables	“solve,” “organize,” “estimate,” “make observations,” “interpret data”
<b>3</b>	<b>Strategic Thinking</b> - requires reasoning, planning, citing evidence - make conjectures, justify responses - using concepts to solve problems and explain phenomena	“explain” “justify”
<b>4</b>	<b>Extend Thinking</b> - complex reasoning, planning, development - making connections between ideas within or across content areas	“design and conduct” “synthesize” “critique”

### High Cognitive Demand: What to Look For

- Multiple Entry Points: Students with varying levels of prior knowledge could access the problem.
- Various Possible Approaches: While the problem may have only one correct answer, there are numerous possible ways to find that answer.
- Higher Order Thinking Required: Students need to think critically and understand the conceptual basis behind the problem, rather than simply insert numbers in a formula.
- Opportunities to Synthesize: Problem invites students to draw together background knowledge about various strands of mathematics, as well as relate mathematics to the real world.
- Justification and Explanation: Requires solution to be explained or applied in one or more ways.