Figure 1.8

Four Categories of Cognitive Demand

Lower-Level Cognitive Demand

Memorization: Requires eliciting information such as a fact, definition, term, or a simple procedure, as well as performing a simple algorithm or applying a formula.

Procedures without connections: Requires the engagement of some mental processing beyond a recall of information.

Higher-Level Cognitive Demand

Procedures with connections: Requires complex reasoning, planning, using evidence, and explanations of thinking.

Doing mathematics: Requires complex reasoning, planning, developing, and thinking most likely over an extended period of time.

Source: Smith & Stein, 2012.