

# Connecting Cognitive Demand with Depth of Knowledge

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What is the cognitive demand and depth of knowledge for each task?

1. Solve  $6x+12 = 11x -33$  (from CME Algebra I)
2. Create a story that would generate a linear function and describe the meaning of key features of the graph as they relate to the story. (from Utah Secondary I, Standard F.IF.4 Curriculum Guide)
3. Design a container that will hold at least  $300 \text{ m}^3$  of water, but that has a lateral surface area of less than  $310 \text{ m}^2$ . (from Utah 7<sup>th</sup> Grade Mathematics, Standard 7.6.G DRAFT) Compare your answer with your neighbor's and choose the best container for holding water.
4. Jack has a coupon for 10% off any item he purchases. If he buys a fishing pole from the 50% clearance rack, will he receive 60% off? Justify your answer. (Adapted from SBAC DRAFT *Content Specifications with Content Mapping for the Summative Assessment of the CCSS for Mathematics* Appendix)