

Numeracy Assessment Rubric

Tree Planting Task

Final Score Not Yet Proficient Proficient Extending

School GSS DTSS SSS

The task: Selecting an employer to work for as a tree planter.

Aspect	Proficiency Descriptor	Task Specific Considerations
Interpret	Makes relevant connections to fully understand the real-world problem in context; Extracts relevant information from the presented problem and other external resources as required to solve the problem; and Identifies relevant explicit parameters and limitations needed to solve the problem.	At least 3 of 4 Multiple Choice questions are correct. At least 2 logical pros and two logical cons are identified for each company. May identify missing piece of information relating to take home pay after 8 weeks of work or may assume 100 more than the minimum number of trees as per previous question or may assume minimum.
Apply	Applies the mathematical understanding needed to translate an unfamiliar scenario into a mathematical problem; Clearly represents the mathematical problem by choosing an appropriate model(s); and Uses mathematical reasoning to develop a logical and organized plan that applies appropriate mathematical tools and/or strategies (e.g. using a calculator, picture, graph, equation).	Uses correct information to perform calculations. Considers the potential change in rate of planting over the course of a day in estimating the number of trees left halfway through the day (Divided by 2 is not a proficient response).
Solve	Estimates reasonably within context and the parameters of the situation using appropriate benchmarks; Solves the mathematical problem using effective strategies as needed; and Verifies the accuracy of the results and/or solution using reasonable estimates and other familiar strategies and identifies factors that could affect the accuracy of the results.	Correctly calculates take home pay for one week; shows work. Correctly calculates take home pay for 8 weeks; shows work. Correctly calculates pack weight at the beginning of the day; shows work.
Analyze	Reflects on the validity (accuracy in context) of their solution within the context of the problem; Evaluates the benefits and limitations of alternative approaches; and Revises approach using the benefits and limitations of alternative approaches.	Identifies at least one other piece of information they wished was included, or one question they would ask the company before deciding who to work for
Communicate	Effectively presents full process and solution using appropriate presentations (e.g. bulleted explanation, equation, graph, model, maps, tables, arrays, etc.); Accurately explains the approach used, identifying limitations and assumptions of the approach; and Presents a logical argument and justifies their decisions and assumptions.	Articulates logical reason(s) for eliminating one company. Articulates logical and relevant (a combination of given information and personal reasons) for selecting which company to work for
Common Errors	<ul style="list-style-type: none"> <input type="checkbox"/> Arithmetic errors <input type="checkbox"/> Strategy/steps not show in calculations <input type="checkbox"/> Incorrect operations used in calculations <input type="checkbox"/> Final answer not clearly stated <input type="checkbox"/> Error in rounding <input type="checkbox"/> Missing or incorrect units of measure (ie. g, kg, \$, etc) <input type="checkbox"/> Charts missing labels 	

In order to achieve a result of PROFICIENT as an overall score, student must score proficient on at least three of the five aspects, of which Communicate must be one.

In order to achieve a result of EXTENDING as an overall score, student must demonstrate exceptional performance under “communicate” and score proficient on all five aspects.