

## Outcome Correlation: Good Fences Make Good Neighbours Mathematics 10-3

### ASSESSMENT AND EVALUATION OF STUDENT LEARNING

This performance task is designed to gather assessment evidence for the following learner outcomes (shown in Times New Roman font) from the Alberta Mathematics Program of Studies (2008).

**Note:** Where text is grey, that portion of the outcome is not specifically addressed in this task.

Learner Outcomes		Criteria for Evaluation *
<p><b>General Outcome – Geometry</b> Develop spatial sense.</p> <p><b>General Outcome – Algebra</b> Develop algebraic reasoning.</p> <p><b>General Outcome – Measurement</b> Develop spatial sense through direct and indirect measurement.</p> <p><b>General Outcome – Number</b> Develop number sense and critical thinking skills.</p>		Students provide evidence of their learning as they:
Strand	Specific Outcomes	
<p><b>Geometry</b></p> <p><b>Algebra</b></p>	<p>2. Demonstrate an understanding of the Pythagorean theorem by:</p> <ul style="list-style-type: none"> <li>• identifying situations that involve right triangles</li> <li>• verifying the formula</li> <li>• applying the formula</li> <li>• solving problems.</li> </ul> <p>[C, CN, PS, V]</p> <p>1. Solve problems that require the manipulation and application of formulas related to:</p> <ul style="list-style-type: none"> <li>• perimeter</li> <li>• area</li> <li>• the Pythagorean theorem</li> <li>• primary trigonometric ratios</li> <li>• income.</li> </ul> <p>[C, CN, ME, PS, R]</p>	<ul style="list-style-type: none"> <li>• apply Pythagorean theorem</li> </ul>
<b>Measurement</b>	<p>1. Demonstrate an understanding of the Système International (SI) by:</p> <ul style="list-style-type: none"> <li>• describing the relationships of the units for length, area, volume, capacity, mass and temperature</li> <li>• applying strategies to convert SI units to imperial units.</li> </ul> <p>[C, CN, ME, V]</p> <p>2. Demonstrate an understanding of the imperial system by:</p> <ul style="list-style-type: none"> <li>• describing the relationships of the units for length, area, volume, capacity, mass and temperature</li> <li>• comparing the American and British imperial units for capacity</li> <li>• applying strategies to convert imperial units to SI units.</li> </ul> <p>[C, CN, ME, V]</p> <p>3. Solve and verify problems that involve SI and imperial linear measurements, including decimal and fractional measurements.</p> <p>[CN, ME, PS, V]</p>	<ul style="list-style-type: none"> <li>• convert between SI units and imperial units</li> </ul>
<b>Number</b>	<p>1. Solve problems that involve unit pricing and currency exchange, using proportional reasoning.</p> <p>[CN, ME, PS, R] [ICT: F2–4.7]</p>	<ul style="list-style-type: none"> <li>• calculate cost of fence materials</li> </ul>

\* Criteria statements appear again in the first column of the evaluation tools (checklists, rating scales and/or rubrics) and are the basis on which student evaluation is made relative to the learner outcomes.

## Outcome Correlation: Good Fences Make Good Neighbours (Continued) Mathematics 10-3

### ASSESSMENT AND EVALUATION OF STUDENT LEARNING

This performance task is designed to gather assessment evidence for the following learner outcomes (shown in Times New Roman font) from the Alberta Mathematics Program of Studies (2008).

**Note:** Where text is grey, that portion of the outcome is not specifically addressed in this task.

Learner Outcomes		Criteria for Evaluation *
<b>General Outcome – Geometry</b> Develop spatial sense. <b>General Outcome – Algebra</b> Develop algebraic reasoning. <b>General Outcome – Measurement</b> Develop spatial sense through direct and indirect measurement. <b>General Outcome – Number</b> Develop number sense and critical thinking skills.		Students provide evidence of their learning as they:
Strand	Specific Outcomes	
Number	2. Demonstrate an understanding of income, including: <ul style="list-style-type: none"> <li>• wages</li> <li>• salary</li> <li>• contracts</li> <li>• commissions</li> <li>• piecework</li> </ul> to calculate gross pay and net pay. [C, CN, R, T] [ICT: C6–4.1, C6–4.2, C7–4.2, F2–4.7]	<ul style="list-style-type: none"> <li>• justify cost of labour</li> </ul>
Number	1. Solve problems that involve unit pricing and currency exchange, using proportional reasoning. [CN, ME, PS, R] [ICT: F2–4.7]	<ul style="list-style-type: none"> <li>• calculate total cost of fence per neighbour</li> </ul>

\* Criteria statements appear again in the first column of the evaluation tools (checklists, rating scales and/or rubrics) and are the basis on which student evaluation is made relative to the learner outcomes.

Mathematical processes are skills that are addressed at all grade levels. They are not taught as discrete skills, but are integrated into the specific outcomes. Links to the processes identified in the Program of Studies are indicated within square brackets after the specific outcomes.

Throughout this task, the following mathematical processes are specifically addressed:

- Communication: communicate in order to clarify, reinforce and modify ideas.
- Connections: connect mathematical ideas to each other or to the real world.
- Problem Solving: develop and apply new mathematical knowledge through problem solving.
- Reasoning: use reasoning skills to analyze a problem, reach a conclusion and justify or defend that conclusion.
- Technology: utilize technology as a tool for learning, solving problems and presenting solutions.
- Visualization: understand mathematical concepts and make connections among them.