**Hockey Pucks**

**TR001 scoring rubric**

**Math Domain**
- ✔ Number/Quantity
- □ Chance/Data
- □ Shape/Space
- □ Arrangement
- □ Function/Pattern

**Math Actions (possible weights: 0 through 4)**
- 2 Modeling/Formulating
- 3 Manipulating/Transforming
- 3 Inferring/Drawing Conclusions
- 1 Communicating

**Math Big Ideas**
- □ Scale
- □ Continuity
- ★ Equivalence
- □ Use of Limits
- □ Reference Frame
- □ Boundedness
- □ General/Particular
- □ Approximation
- □ Representation
- □ Invariance/Symmetry
- □ Contradiction
- □ Other

1. **a.** For 10 pucks you would need one tube.
   
   For 14 pucks you would need two tubes (one tube of 10, remaining 4 pucks in another tube).
   
   For 26 pucks you will need three tubes (two tubes of 10, remaining 6 pucks in another tube).
   
   **b.** The last tube would be 6/10 filled. Therefore, the unfilled portion would be 4/10 or 2/5, or 40%.

2. **a.** For 120 pucks you would need 2 tubes (two tubes of 60).
   
   For 200 pucks you would need 4 tubes (three tubes of 60, 20 remaining pucks in another tube).
   
   For 520 pucks you would need 9 tubes (eight tubes of 60, 40 remaining pucks in another tube).
   
   **b.** The last tube would be 20/60 filled, therefore the unfilled portion would be 40/60 or 2/3 or about 67%.
<table>
<thead>
<tr>
<th></th>
<th>partial level (1 or 2)</th>
<th>full level (3)</th>
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</thead>
<tbody>
<tr>
<td><strong>Modeling/Formulating</strong></td>
<td>Student does not understand the idea of packing partially full tubes.</td>
<td>In all cases, student exhibits understanding of the packing process.</td>
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<td>(weight: 2)</td>
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<td><strong>Transforming/Manipulating</strong></td>
<td>Some of the numeric responses are correct.</td>
<td>All of the numeric responses are correct, including the fractional and percentage answers in 1b and 2b.</td>
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<td>(weight: 3)</td>
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<td><strong>Inferring/Drawing Conclusions</strong></td>
<td>Student is unable to infer what portion of the tube will remain unfilled, based on information about the filled portion.</td>
<td>Student is able to correctly express what portion of the tube will remain unfilled.</td>
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<td>(weight: 3)</td>
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<tr>
<td><strong>Communicating</strong></td>
<td></td>
<td>Student provides clear numerical responses.</td>
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<td>(weight: 1)</td>
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