Hockey Pucks   *TR001 scoring rubric*

Math Domain

✓ Number/Quantity	☐ Shape/Space	☐ Function/Pattern
☐ Chance/Data	☐ Arrangement	

Math Actions (possible weights: 0 through 4)

2 Modeling/Formulating	3 Manipulating/Transforming
3 Inferring/Drawing Conclusions	1 Communicating

Math Big Ideas

☐ Scale	☐ Reference Frame	☐ Representation
☐ Continuity	☐ Boundedness	☐ Invariance/Symmetry
x Equivalence	☐ General/Particular	☐ Contradiction
☐ Use of Limits	☐ Approximation	☐ 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%.

	partial level (1 or 2)	full level (3)
Modeling/ Formulating (weight: 2)	Student does not understand the idea of packing partially full tubes.	In all cases, student exhibits understanding of the packing process.
Transforming/ Manipulating (weight: 3)	Some of the numeric responses are correct.	All of the numeric responses are correct, including the fractional and percentage answers in **1b** and **2b**.
Inferring/ Drawing Conclusions (weight: 3)	Student is unable to infer what portion of the tube will remain unfilled, based on information about the filled portion.	Student is able to correctly express what portion of the tube will remain unfilled.
Communicating (weight: 1)		Student provides clear numerical responses.