

Math Domain

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|---|--------------------------------------|-----------------------------------|
| <input checked="" type="checkbox"/> Number/Quantity | <input type="checkbox"/> Shape/Space | <input type="checkbox"/> Function |
| <input type="checkbox"/> Chance/Data | <input type="checkbox"/> Arrangement | |

Math Actions (possible weights: 0 through 4)

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|--|--|
| <input type="checkbox"/> 1 Modeling/Formulating | <input type="checkbox"/> 2 Manipulating/Transforming |
| <input type="checkbox"/> 2 Inferring/Drawing Conclusions | <input type="checkbox"/> 2 Communicating |

Math Big Ideas

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|---|---|--|
| <input type="checkbox"/> Scale | <input type="checkbox"/> Reference Frame | <input checked="" type="checkbox"/> Representation |
| <input type="checkbox"/> Continuity | <input type="checkbox"/> Boundedness | <input type="checkbox"/> Invariance/Symmetry |
| <input checked="" type="checkbox"/> Equivalence | <input type="checkbox"/> General/Particular | <input type="checkbox"/> Contradiction |
| <input type="checkbox"/> Use of Limits | <input type="checkbox"/> Approximation | <input type="checkbox"/> Other |

1. The least number of boxes that Mr. Ramon should buy is 5, since 4 boxes times 6 cupcakes is only 24, not enough for the 27 students in the class. The flavor of the cupcakes is immaterial.
2. If Mr. Ramon buys 5 boxes, there will be 3 extra cupcakes. $(30 - 27)$.

Extension

3. Using the information from question 1, he should buy twice as many boxes, or ten boxes, in order to give each student twice as many cupcakes. Some students may realize that he would only need nine boxes if some students were willing to get two cupcakes of the same flavor.

	partial level (1 or 2)	full level (3)
Modeling/ Formulating (weight: 1)	Student formulates a strategy with which to represent some of the given information.	Student formulates a strategy which takes into account all of the given information.
Transforming/ Manipulating (weight: 2)	Student gets a correct numerical answer for either question 1 or 2 .	Student gets correct numerical answers for both questions 1 and 2 .
Inferring/ Drawing Conclusions (weight: 2)	Student is able to demonstrate an understanding of part/whole in order to infer the least number of boxes needed, but not the remainder.	Student is able to demonstrate an understanding of part/whole in order to infer both the least number of boxes, and the extra cupcakes.
Communicating (weight: 2)	Student gives a partial, unclear, or incomplete explanation for questions 1 and 2 . If a numerical description is used for question 1, it may be out of sequence, or missing a step.	Student gives a full, clear, complete explanation for questions 1 and 2 , utilizing both prose and numerical evidence.