

Math Domain

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|---|---|-----------------------------------|
| <input checked="" type="checkbox"/> Number/Quantity | <input checked="" 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"/> 2 Modeling/Formulating | <input type="checkbox"/> 2 Manipulating/Transforming |
| <input type="checkbox"/> 3 Inferring/Drawing Conclusions | <input type="checkbox"/> 1 Communicating |

Math Big Ideas

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|---|---|--|
| <input checked="" type="checkbox"/> Scale | <input type="checkbox"/> Reference Frame | <input 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 checked="" type="checkbox"/> Approximation | <input type="checkbox"/> Other |

1. Regardless of how students use the inchworm (some may measure it with a ruler, others may measure with their fingers, still others may need to have a cut-out copy to manipulate), they should come up with the answer that Ms. Muffet’s marigold is about 4 inchworms tall.
2. Some students may get an answer of eight inchworms tall by adding four and four, others may multiply four times two.
3. Younger students may need to actually place four inchworms in each square of the garden, and count to 24. Others will think of it as an addition problem: 4 and 4 are 8, 8 and 8 are 16, 16 and 8 are 24. Others will do it as multiplication: 6 squares times 4 inchworms/square is 24.
4. Here again, there are a variety of correct approaches to get the answer of 10. Younger students may need to place, draw and count. Others will realize that each square is one inchworm on a side, so counting up the outside edges leads to 10. Others may group it as $2 + 3 + 2 + 3 = 10$.

	partial level (1 or 2)	full level (3)
Modeling/ Formulating (weight: 2)	Student is able to use the inchworm as a unit of measure with some success in questions 1 and 3 .	Student is able to use the inchworm as a unit of measure with total success in questions 1 and 3 .
Transforming/ Manipulating (weight: 2)	Student arrives at a correct numerical answer for one or two of the questions.	Student arrives at a correct numerical answer for questions 1, 2 and 3 .
Inferring/ Drawing Conclusions (weight: 3)	Student either uses the answer from question 1 to correctly answer question 2 , or uses the given information to answer one of the two parts of question 3 .	Student uses the given information and the answer to question 1 in an efficient way to correctly answer questions 2 and 3 .
Communicating (weight: 1)	Student gives most answers in clear numerical or prose form.	Student gives all answers in clear numerical or prose form.