

“Do Bees Build It Best?” PORTFOLIO

COVER LETTER FOR Do Bees Build It Best?

1. Cover Letter Introduction (36 pts)

a. Identify and describe the main mathematical ideas

- 0 – No mathematical concepts identified or described
- 2 – Limited, vague description of 2-3 mathematical concepts or 1 satisfactory description of a concept
- 4 – Limited, vague description of 4-5 mathematical concepts or only 2 satisfactory descriptions of concepts
- 8 – Satisfactory description of 3-4 mathematical concepts with minimal reference to specific unit examples
- 12 – Excellent description of 5-6 mathematical concepts with extensive reference to specific unit examples

b. Describe how the key ideas of area and volume were developed

- 0 – No key ideas described
- 2 – Limited, vague description of how the key ideas of area and volume were developed, with no supporting examples
- 4 – Fair but limited description of how the key ideas of area and volume were developed, with minimal supporting examples
- 8 – Satisfactory description of how the key ideas of area and volume were developed, with adequate supporting examples
- 12 – Excellent description of how the key ideas of area and volume were developed, with well-selected supporting examples

c. Describe how the key ideas of area and volume were used to solve the central problem

- 0 – No solution described
- 2 – Limited, vague description of how the key ideas of area and volume were used to solve the central problem, with no supporting examples
- 4 – Fair but limited description of how the key ideas of area and volume were used to solve the central problem, with minimal supporting examples
- 8 – Satisfactory description of how the key ideas of area and volume were used to solve the central problem, with adequate supporting examples
- 12 – Excellent description of how the key ideas of area and volume were used to solve the central problem, with well-selected supporting examples

2. Explanation for Selected Papers (20 pts)

a. Describe why you selected the POW you included in your portfolio

- 0 – No POW selected
- 2 – A limited, incomplete, or vague description of why you selected the POW you included in the portfolio with no specific references to any information in the POW
- 4 – A fair description of why you selected the POW, but lacks depth and there is little reference to specific information in the POW
- 8 – A good description of why you selected the POW with some reference and explanation of specific information in the POW

10– A complete and thorough description of why you selected the POW, with extensive reference to information that is explained in detail

b. Describe how the additional work you included demonstrates your best efforts

0 – No additional paper(s) selected

2 – A limited, incomplete, or vague description of how the additional work demonstrates your best effort

4 – A fair description of how your additional work demonstrates your best efforts, but lacks depth and there is little reference to specific information in the additional work

8 – A good description of how additional work demonstrates your best effort with some references to examples in the work that support your definition of “best work” and describe how the work helped you

10 A complete and thorough description of how additional work demonstrates your best effort with extensive references to examples that support your definition of “best work and describe how the work helped you

SELECTED PAPERS FROM SOLVE IT! (24 pts)

1. Homework 28: Portfolio of Formulas

0 – is not in portfolio

2– in portfolio, but is incomplete or does not show evidence of a considerable amount of time and effort went into writing down all the formulas, an explanation for each formula, defining the variables, and sketches to make the formulas clearer

4 – in portfolio, is complete with minimal evidence of time and effort

8- in portfolio, is complete with satisfactory evidence of time and effort

10 – in portfolio, is complete with extensive evidence of time and effort

2. Selected POW

0 – is not in portfolio

1 – POW is in portfolio, but is incomplete or had a low overall self-assessment and does not show evidence of a considerable amount of time or effort

2 – POW is in portfolio, is complete with minimal evidence of time and effort and a low overall self-assessment score

4- POW is in portfolio, is complete with satisfactory evidence of time and effort, however not all scoring areas rated high

6 – POW is in portfolio is complete with extensive effort of time and effort and a high overall self-assessment

3. Other High Quality Work

0 – is not in portfolio

1- is in portfolio, but is of poor quality and does not support the concept of “best efforts” or have any reason for its addition to the portfolio

2 – is in portfolio, but is of limited quality with no definite reason for its addition to the portfolio

4 – is in portfolio and is of satisfactory quality with possible reasons for its addition to the portfolio

8 – is in portfolio and is of excellent quality with definite reasons for its addition to the portfolio

Personal Growth (16 pts)

1. Describe the project's role in helping you understand the mathematical ideas of the unit

- 0 – No description
- 1 – A limited and/or vague description with no supporting examples
- 2 – A limited description with few supporting examples
- 3 – A satisfactory description with several supporting examples, however examples tend to rather general
- 4 – A detailed description with many specific supporting examples

2. Describe the project's role in giving you an appreciation for the usefulness or significance of the mathematical ideas in the unit

- 0 – No description
- 1 – A limited and/or vague description with no supporting examples
- 2 – A limited description with few supporting examples
- 3 – A satisfactory description with several supporting examples, however examples tend to rather general
- 4 – A detailed description with many specific supporting examples

3. Describe any experiences of working with a partner on an extended project

- 0 – No description
- 1 – A limited and/or vague description with no supporting examples
- 2 – A limited description with few supporting examples
- 3 – A satisfactory description with several supporting examples, however examples tend to rather general
- 4 – A detailed description with many specific supporting examples

4. Describe any other thoughts about your experiences you want to share about working on a project

- 0 – No description
- 1 – A limited and/or vague description with no supporting examples
- 2 – A limited description with few supporting examples
- 3 – A satisfactory description with several supporting examples, however examples tend to rather general
- 4 – A detailed description with many specific supporting examples

SELF-ASSESSMENT OF PORTFOLIO (4 pts)

a. Grade and Justify your work using a self-assessment scoring rubric

- 0 – Work not graded with rubric
- 1 – Score values provide with no justification
- 2 – Score values provide with minimal rational and many/most values not

acceptable based on scoring guide criteria

3 - Scores values provided with fair/good rationales, but some values not acceptable based on scoring guide criteria

4 - Score values provided with strong rationales, all values acceptable based on scoring guide criteria