

# “SOLVE IT!” PORTFOLIO

## COVER LETTER FOR PATTERNS

### 1. Cover Letter Introduction (16 pts)

#### a. Identify and describe the main mathematical ideas

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

#### b. Describe how the key ideas were developed

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

### 2. Explanation for Selected Papers (40 pts)

#### a. Describe how your selected papers played an important role in your understanding and use of the “Guess and Check” method to solve equations (HW 30)

- 0 – No paper(s) selected
- 1- Limited, incomplete, or vague description of how selected paper played an important role in your understanding and use of the guess and check method to solve equations with no specific references to papers selected
- 2- A fair description of how selected paper played an important role in your understanding and use of the guess and check method to solve equations, but description lacks depth and there is little reference to selected paper
- 4- A good description of how selected paper played an important role in your understanding and use of the guess and check method to solve equations, with some specific references made to selected paper
- 6- A complete and thorough description of how selected paper played an important role in your understanding and use of the guess and check

method to solve equations, and there are extensive references to material in the selected paper

**b. Describe how your selected papers played an important role in your understanding and use of the “mystery-bags” method to solve equations (HW 30)**

- 0 – No paper(s) selected
- 1- Limited, incomplete, or vague description of how selected papers played an important role in your understanding and use of the mystery-bag method to solve equations with no specific references to papers selected
- 2- A fair description of how selected paper played an important role in your understanding and use of the mystery-bag method to solve equations, but description lacks depth and there is little reference to selected paper
- 4- A good description of how selected paper played an important role in your understanding and use of the mystery-bag method to solve equations, with some specific references made to selected paper
- 6 - A complete and thorough description of how selected paper played an important role in your understanding and use of the mystery-bag method to solve equations, and there are extensive references to material in the selected paper

**c. Describe how your selected papers played an important role in your understanding and use of the “Unscrambling Equations” method to solve equations (HW 30)**

- 0 – No paper(s) selected
- 1 - Limited, incomplete, or vague description of how selected papers played an important role in your understanding and use of the unscrambling equations method to solve equations with no specific references to papers selected
- 2 -A fair description of how selected papers played an important role in your understanding and use of the unscrambling equations method to solve equations, but description lacks depth and there is little reference to selected papers
- 4- A good description of how selected paper played an important role in your understanding and use of the unscrambling equations method to solve equations, with some specific references made to selected papers
- 6 - A complete and thorough description of how selected papers played an important role in your understanding and use of the unscrambling equations method to solve equations, and there are extensive references to material in the selected papers

**d. Describe how your selected paper played an important role in your understanding & use of the “graphing” method to solve equations (HW 30)**

- 0 – No paper(s) selected
- 1 - Limited, incomplete, or vague description of how selected papers played an important role in your understanding and use of the graphing method to solve equations with no specific references to papers selected

- 2 - A fair description of how selected papers played an important role in your understanding and use of the graphing method to solve equations, but description lacks depth and there is little reference to selected paper
- 4 - A good description of how selected paper played an important role in your understanding and use of the graphing method to solve equations, with some specific references made to selected paper
- 6 - A complete and thorough description of how selected papers played an important role in your understanding and use of the graphing method to solve equations, and there are extensive references to material in the selected paper

**e. Describe why you selected the POW you included in your portfolio**

0 – No POW selected

1 – 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

2 – A fair description of why you selected the POW, but lacks depth and there is little reference to specific information in the POW

4– A good description of why you selected the POW with some reference and explanation of specific information in the POW

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

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

0 – No additional paper(s) selected

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

2 – 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

4– 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”

8– 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”

**SELECTED PAPERS FROM SOLVE IT! (20 pts)**

**1. Homework #30: A Solving Sampler**

0 – is not in portfolio

1 – in portfolio, but is incomplete or does not show evidence of a considerable amount of time and effort went into the finished product

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

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

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

**2. Get It Straight**

0 – is not in portfolio

- 1 – in portfolio, but is incomplete or does not show evidence of a considerable amount of time and effort went into developing new questions, deciding which ones to explore, conjectures you made, rules or patterns you found, and explanations of rules or patterns worked
- 2 – in portfolio, is complete with minimal evidence of time and effort
- 3- in portfolio, is complete with satisfactory evidence of time and effort
- 4 – in portfolio, is complete with extensive evidence of time and effort

### **3. Homework#24: A Distributive Summary**

- 0 – is not in portfolio
- 1 – paper(s) in portfolio, but are incomplete or do not show evidence of a considerable amount of time and effort and do not support the fact that you know what the distributive property is, why it’s true, and state examples when you would use it
- 2 –paper(s) in portfolio, are complete with minimal evidence of time and effort with limited support that you know what the distributive property is, why it’s true, and state examples when you would use it
- 3- paper(s) in portfolio, are complete with satisfactory evidence of time and effort with acceptable support that you know what the distributive property is, why it’s true, and state examples when you would use it
- 4– paper(s)in portfolio, are complete with extensive evidence of time and effort with extensive support form your student-made tables and written descriptions, explanations, and analysis of the distributive property

### **4. 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
- 3- POW is in portfolio, is complete with satisfactory evidence of time and effort, however not all scoring areas rated high
- 4 – POW is in portfolio is complete with extensive effort of time and effort and a high overall self-assessment

### **5. 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
- 3 – is in portfolio and is of satisfactory quality with possible reasons for its addition to the portfolio
- 4 – is in portfolio and is of excellent quality with definite reasons for its addition to the portfolio

**“Solve It!” and Algebra (20 pts)**

- 1. Describe how this unit compared to your Year 1 experiences in IMP**
  - 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 how you liked this unit compared to units with a central problem**
  - 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 how do you felt about this unit's emphasis on traditional skills**
  - 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 how the material in this unit compared to your idea of what algebra is?**
  - 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
  
- 5. Describe any other thoughts about your experience with this "type of unit" you want to share**
  - 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