| Skeleton Tower | Rubric |  |
| :---: | :---: | :---: |
|  | Points | Section points |
| 1. Gives correct answer: 66 <br> Partial credit: <br> Adds together the numbers $1,5,9,13,17$ and 21 with no more than one error. | 2 <br> (1) | 2 |
| 2. Gives correct answer: 276 <br> Gives a correct explanation such as: <br> Each layer has 4 more cubes than the layer above. <br> Adds together 12 layers. <br> Alternatively: <br> May add the number of cubes in one wing of the tower, and then multiply by 4. <br> The number of cubes on the 12 layers are 1,5,9,13,17,21,15,29,33,37,41,45 | 1 <br> 2 <br> or <br> 2 <br> 1 | 4 |
| 3. Gives correct answer: $\mathbf{2 n}^{\mathbf{2}}-\mathbf{n}$ <br> Partial credit: <br> Finds the number of cubes for at least the first 4 towers to try to find the pattern. 1, 6, 15, 28, 45, $66 \ldots .$. <br> Provides a correct explanation showing how the formula can be found. | 2 <br> (1) <br> 2 | 4 |
| Total Points |  | 10 |

