## 2014 EMIC Answers

## Individual

| $\mathbf{1 .}$ | 49 | 2. | 7 | $\mathbf{3 .}$ | 45 | $\mathbf{4 .}$ | 6 | $\mathbf{5 .}$ | 704 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6. | 5 | 7. | 144 | $\mathbf{8 .}$ | 15 | $\mathbf{9 .}$ | 61 | $\mathbf{1 0 .}$ | 43 |
| 11. | 30 | $\mathbf{1 2 .}$ | 2019 | $\mathbf{1 3 .}$ | 30 | $\mathbf{1 4 .}$ | 7.9 | $\mathbf{1 5 .}$ | 75 |

## Team

| 1. | 36 |  | 2. | $\begin{gathered} (18,7),(17,8),(16,9),(2,14),(11,5) \\ (4,12),(13,3),(6,10),(15,1) \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3. | 81 |  |  |  |  |  |
| 4. | The 8 possible adoption schemes are as follows |  |  |  |  |  |
|  | 1-year-old | 2-year-od | 3-ye | ar-od | 4-year-od | 6-year-od |
|  | Apartment 4 | Apartment 2 | Apart | ment 3 | Apartment 12 | Apartment 6 |
|  | Apartment 2 | Apartment 4 | Apart | ment 3 | Apartment 12 | Apartment 6 |
|  | Apartment 12 | Apartment 2 | Apar | ment 3 | Apartment 4 | Apartment 6 |
|  | Apartment 2 | Apartment 12 | Apart | ment 3 | Apartment 4 | Apartment 6 |
|  | Apartment 3 | Apartment 2 | Apartm | ent 12 | Apartment 4 | Apartment 6 |
|  | Apartment 6 | Apartment 2 | Apar | ment 3 | Apartment 4 | Apartment 12 |
|  | Apartment 2 | Apartment 6 | Apart | ment 3 | Apartment 4 | Apartment 12 |
|  | Apartment 3 | Apartment 2 | Apart | ment 6 | Apartment 4 | Apartment 12 |
| 5. | 1001011 |  |  |  |  |  |
| 6. <br> (a) | 6, |  |  2 triangles whose side length is the <br> largest. For each triangle of the next <br> 6. <br> 6. <br> (b) such kind of triangles. In a  <br> (biangle of the next size, their number  <br> is 12. There are 12 triangles of the  <br> next size. For each triangle of the next  <br> size, their number is 14. Finally, there  <br> are 24 triangles of the smallest size.  | 2 triangles whose side length is the largest. For each triangle of the next size, 2 such kind of triangles. In a triangle of the next size, their number is 12 . There are 12 triangles of the next size. For each triangle of the next size, their number is 14 . Finally, there are 24 triangles of the smallest size. |  |  |
| 7. | 2 |  | 8. | 8 |  |  |
| 9. | 95 |  | 10. | Divide the coins into four groups A, B, C and D. ...... |  |  |

