Name Date

Enrichment and Extension

1.2

Magic Squares with Integers

According to a legend, the Chinese Emperor Yu-Huang saw a magic square
on the back of a turtle. In a *magic square*, the sum of the numbers in each
row, column, and diagonal are the same. This sum is called the magic sum.

This magic square uses integers  to 2 exactly once. The magic sum is 

 Diagonal 1: 

|  |  |  |
| --- | --- | --- |
| 1 | –6 | –1 |
| –4 | –2 | 0 |
| –3 | 2 | –5 |

 Row 1: 

 Row 2: 

 Row 3: 

 Diagonal 2: 

Column 1: 

Column 2: 

Column 3: 

Complete the magic square using each integer only once. The magic sum is given.

 1. Use  Magic Sum  2. Use  Magic Sum 

|  |  |  |
| --- | --- | --- |
| –8 |  | –4 |
|  |  |  |
|  | –7 |  |

|  |  |  |
| --- | --- | --- |
| –2 |  |  |
|  |  | 1 |
|  | –5 |  |

 3. Use  Magic Sum  2 4. Use  Magic Sum 

|  |  |  |  |
| --- | --- | --- | --- |
|  | 7 |  | –4 |
|  |  | –1 |  |
| 0 |  | 3 | –3 |
|  | –5 |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| –4 | 1 |  |  |
| –9 |  | –3 | 0 |
|  | –8 |  | –6 |
|  |  | 4 |  |

 5. Create your own magic square with integers having the magic sum 6.