**A set of five ordering cards:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| a – 2 |  | 3a + 1 |  | a²+ a |
|  |  |  |  |  |
|  | 7 – a |  | 3(a + 1) |  |

* If a = 1, place the cards in order, smallest first.
* Repeat for a = 2
* Repeat for a = -1
* Do any cards stay in a particular order? Will this always be true?

Some solutions to this particular set of ordering cards:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3a+1 |  | 3(a+1) |  | a2+a |  | 7-a |  | a-2 |

a = 1

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| a-2 |  | a2+a |  | 3a+1 |  | 3(a+1) |  | 7-a |

a = 2

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| a-2 |  | 7-a |  | a2+a |  | 3a+1 |  | 3(a+1) |

a = 0

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| a-2 |  | a2+a |  | 3a+1 |  | 3(a+1) |  | 7-a |

a = -3

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3a+1 |  | 3(a+1) |  | a-2 |  | a2+a |  | 7-a |

a = ½

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| a-2 |  | a2+a |  | 3a+1 |  | 3(a+1) |  | 7-a |