Lesson 7: If–Then Moves with Integer Number Cards

Classwork

**Exploratory Challenge: *Integer Game Revisited***

Let’s investigate what happens if a card is added or removed from a hand of integers.

My cards:

My score:

**Event 1**

My new score:

Conclusion:

**Event 2**

My new score:

Conclusion:

**Event 3**

My new score:

Expression:

Conclusion:

**Event 4**

Expression:

Conclusion:

Exercises

1. The table below shows two hands from the Integer Game and a series of changes that occurred to each hand. Part of the table is completed for you. Complete the remaining part of the table; then summarize the results.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Hand 1 | Result | Hand 2 | Result |
| Original |  |  |  |  |
| Add  |  |  |  |  |
| Subtract  |  |  |  |  |
| Multiply by  |  |  |  |  |
| Divide by  |  |  |  |  |

1. Complete the table below using the multiplication property of equality.

|  |  |  |
| --- | --- | --- |
|  | Original expression and result | Equivalent expression and result |
|  |  |  |
| Multiply both expressions by  |  |  |
| Write a conclusion using if–then |  |

Lesson Summary

* If a number sentence is true, and the same number is added to both sides of the equation, then the resulting number sentence is true. *(addition property of equality)*
* If a number sentence is true, and the same number is subtracted from both sides of the equation, then the resulting number sentence is true. *(subtraction property of equality)*
* If a number sentence is true, and both sides of the equation are multiplied by the same number, then the resulting number sentence is true. *(multiplication property of equality)*
* If a number sentence is true, and both sides of the equation are divided by the same nonzero number, then the resulting number sentence is true. *(division property of equality)*

Homework: Unit 3 Lesson 7

1. Evaluate the following numerical expressions.

|  |  |
| --- | --- |
|  |  |
| 1.
 |  |
| 1.
 |  |

1. Which expressions from Exercise 1 are equal?
2. If two of the equivalent expressions from Exercise 1 are divided by , write an if–then statement using the properties of equality.
3. Write an if–then statement if is multiplied to the following equation: .