Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Homework #1 – Integers and Absolute Value**

1. Circle the following numbers that are integers.

9 , 3.2 , ⎻ 1 , , ⎻ 0.25 , 15

2. What is the absolute value of an integer?

3. Which expression does *not* belong with the other three? Explain your reasoning.

⃒ 6 ⃒ 6 ⎻ 6 ⃒ ⎻ 6 ⃒

**Find the absolute value of the integer.**

|  |  |  |  |
| --- | --- | --- | --- |
| 4. ⃒ 9 ⃒ | 5. ⃒ - 9 ⃒ | 6. ⃒ -10 ⃒ | 7. ⃒ 10 ⃒ |

**Complete the statement using <, >, or =.**

|  |  |
| --- | --- |
| 8. 2 \_\_\_\_\_\_\_\_\_\_ ⃒ ⎻ 5 ⃒ | 9. ⃒ ⎻4 ⃒ \_\_\_\_\_\_\_\_\_\_ ⎻ 6 |
| 10. ⃒ ⎻ 1 ⃒ \_\_\_\_\_\_\_\_\_\_ ⃒ ⎻ 8 ⃒ | 11. ⃒ 5 ⃒ \_\_\_\_\_\_\_\_\_\_ ⃒ ⎻ 5 ⃒ |
| **Solve the following problems using your knowledge of absolute value and integers.** | |
| 12. Describe and correct the error.  ⃒ 10 ⃒ = ⎻ 10 | |
| 13. You deposit $50 in your savings account. One week later, you withdraw $20. Write each  amount as an integer. | |
| 14. You go down 8 floors in an elevator. Your friend goes up 5 floors in an elevator. Write each  amount as an integer. | |

**Order the values from least to greatest.**

|  |  |
| --- | --- |
| 15. 8 , ⃒ 3 ⃒ , ⎻ 5 , ⃒ ⎻ 2 ⃒, ⎻ 2 | 16. ⃒ ⎻ 34 ⃒ , 21 , ⎻ 17 , ⃒ 20 ⃒ , ⃒ ⎻ 11 ⃒ |

**Simplify the expression.**

|  |  |  |
| --- | --- | --- |
| 17. ⃒ ⎻ 30 ⃒ | 18. ⎻ ⃒ 4 ⃒ | 19. ⎻ ⃒ ⎻ 15 ⃒ |
| 20. The *summit elevation* of a volcano is the elevation of the top of the volcano relative to sea  level. The summit elevation of the volcano Kilauea in Hawaii is 1277 meters. The summit  elevation of the underwater volcano Loihi in the Pacific Ocean is ⎻ 969 meters. Which  summit is closer to sea level? | | |