

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

## Comparing and Ordering Integers

- 1) Which of these numbers is not an integer:  $-31$ ,  $74$ ,  $22.5$ ,  $-7$ , or  $19$ ?
- 2) Explain why the absolute value of a number is never negative.
- 3) Write the integers in order from least to greatest:  $-9$ ,  $12$ ,  $6$ ,  $-3$ ,  $0$ ,  $-5$ .

State the absolute value of the number.

- |          |           |           |           |
|----------|-----------|-----------|-----------|
| 4) 1     | 5) $-9$   | 6) 15     | 7) $-12$  |
| 8) $-22$ | 9) 7      | 10) 21    | 11) $-40$ |
| 12) 38   | 13) $-42$ | 14) $-73$ | 15) 105   |

State the opposite of the number.

- |           |           |           |           |
|-----------|-----------|-----------|-----------|
| 16) 14    | 17) $-33$ | 18) $-24$ | 19) 81    |
| 20) 6     | 21) 9     | 22) $-2$  | 23) $-11$ |
| 24) $-31$ | 25) $-67$ | 26) 81    | 27) 100   |

Evaluate the expression when  $x = -3$ .

- |               |                  |                |                  |
|---------------|------------------|----------------|------------------|
| 28) $ x  + 8$ | 29) $ x  +  -1 $ | 30) $20 -  x $ | 31) $ 50  -  x $ |
| 32) $-x$      | 33) $ x  - 1$    | 34) $32 -  x $ | 35) $-x - 2$     |
| 36) $5 -x $   | 37) $-x - 3$     | 38) $5 + (-x)$ | 39) $ x  + 10$   |

Copy and complete the statement using  $<$  or  $>$ .

40)  $-8$    $3$

41)  $-9$    $-12$

42)  $0$    $-4$

43)  $-15$    $-7$

Graph the integers on a number line. Then write the integers in order from least to greatest.

44)  $-12, 4, -6, 0, -1$

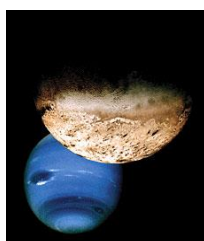
45)  $15, -8, -4, 7, -5$

46)  $35, 60, -10, -5, 40$

47)  $-22, -30, -25, -16$

48) The elevation of the top of a volcano relative to sea level is called the summit elevation. The summit elevation of Kilauea in Hawaii is 1222 meters. The summit elevation of the underwater volcano Loihi in the Pacific Ocean is  $-980$  meters. Which is farther from sea level, the top of Kilauea or the top of Loihi?

49) In 1989, data collected by the Voyager spacecraft showed the surface temperature of Triton, Neptune's largest moon, to be about  $-392^{\circ}\text{F}$ . Eight years later, data from the Hubble telescope showed the temperature to be about  $-389^{\circ}\text{F}$ .



Did the Hubble data indicate a temperature less than or greater than the one based on the Voyager data?

50) Archaeologists have discovered underwater ruins of ancient cities. The table shows the elevation relative to sea level of the deepest point of ruins at several sites.

Site	Elevation relative to sea level
Helike, Greece	3 meters below
Heraklion, Egypt	8 meters below
Port Royal, Jamaica	12 meters below
Unnamed city, Bay of Bengal	37meters below

- Write an integer to represent each elevation in the table.
- Graph the integers on a number line.
- Identify the site whose deepest point is farthest from sea level.
- The elevation of the modern-day Greek city of Polónia is 1 meter above sea level. Is Polónia closer to or farther from sea level than the deepest point of the ruins of Helike?

51) The table shows the daily high temperature at Alaska's Barrow Observatory over a seven-day period.

Day	Temperature
Sunday	$-19^{\circ}\text{C}$
Monday	$-17^{\circ}\text{C}$
Tuesday	$-14^{\circ}\text{C}$
Wednesday	$-9^{\circ}\text{C}$
Thursday	$-13^{\circ}\text{C}$
Friday	$-18^{\circ}\text{C}$
Saturday	$-21^{\circ}\text{C}$

- Did the temperature increase or decrease from Sunday to Monday?
- Did the temperature increase or decrease from Friday to Saturday?
- Which day's high temperature have been highest for the week? Which was lowest?