Topic 5: Adding & Subtracting Integers – Study Guide

1. In the first quarter, the Patriots get the football at the 40-yard line. On the next play, Tom Brady is sacked for a **loss** of 7 yards. Then James White is tackled behind the line of scrimmage for another **loss** of 4 yards.

    Which of the following expressions **<u>cannot</u>** be used to determine the yard line the Patriots are on after the second play?

    ☐ 40 + (-7) + (-4)   ☐ 40 – 7 + 4

    ☐ 40 – (7 + 4)   ☐ 40 + (-7 + -4)

2. **REWRITE the false statement to create a true statement**:

    The difference between a positive integer and a negative integer is sometimes negative.

3. Elevation is the height compared to sea level. If the height of a landmass is below sea level, the elevation is negative. The lowest point in Australia is Lake Eyre which has an elevation of -15 meters. Clearly mark and label this point on the number line if each unit represents 1 m. (Hint: Start by determining where zero would be on this number line.)

4. More than one quarter of The Netherlands lies below sea level. Lucas visits a museum at an elevation of 18 m and takes a taxi cab to the Amsterdam Schiphol Airport which has an elevation of -4 m. What is the **total change** in Lucas' elevation?

5. The table below gives the elevation of some areas in The Netherlands.

City	Elevation (in meters)
Zuidplaspolder	-7
Haarlem	-5
Deventer	5
Spijkenisse	-2
Zeist	4

    a. Order the elevations from least to greatest

       .

    b. What is the range of elevations listed in the table? Write the number sentence to represent the situation described.
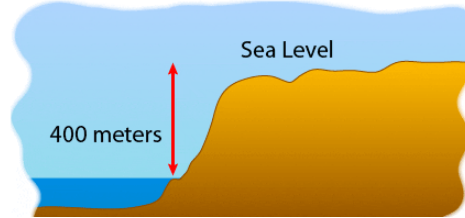
6. Plot a point at -25 on the number line below. Then **circle** its opposite.

7. The additive inverse of -13 is _____.

8. The highest point in Africa is Mt. Kiliamanjaro at 19,340 feet above sea level. The lowest point is Lake Assal at 509 feet below sea level. What is the difference between these two elevations? Write the number sentence that represents the situation.

9. The lowest point of land on Earth is located on the shore of the Dead Sea. Its elevation in 1996 was reported to be -400 meters.

The Dead Sea is lowering at a rate of nearly 4 meters every 25 years so the elevation of the shoreline is constantly changing. Approximately what will the elevation be in 2096?

10. Eventually, the water in the Dead Sea is expected to dry up. The lowest point on the sea floor is approximately 1225 meters below sea level. This will eventually be the lowest elevation on land. If in 1996 the elevation was reported to be -475 meters, what is the difference between this elevation and the eventual lowest elevation?