# Integers in the Real World

Name _____

A scuba diver is swimming 30 meters below the surface of the water. A boat is waiting for him at the surface. Use a number line to represent this situation. What does 0 mean on the number line?

```
0 ———→ Boat/Surface of Water
 —10
 —20
 —30 —→ Scuba Diver
 —40
```

- The diver is 30 meters below the surface of the water. The integer is –30.

- The boat is neither above nor below the surface of the water. The integer is 0.

So, 0 represents the surface of the water in this situation.
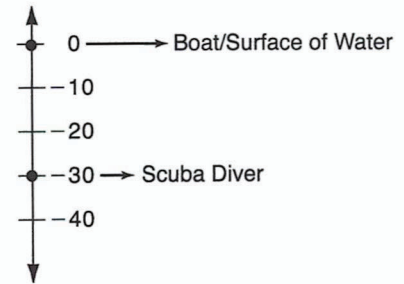
Plot the point that represents the situation. Then explain what 0 represents in the situation

1. Angela opens a savings account with an initial deposit of $100.

```
◄─┼──┼──┼──┼──┼──┼──┼──┼──┼──┼─►
```

_____

2. Arthur digs a hole 2 feet deep.

```
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```

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3. A submarine travels 500 feet below the surface of the ocean.

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```

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4. A bird flies 50 feet above the ground.

```
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```

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Problem Solving

Represent the situation on the number line. Then explain why the second statement is false.

5. Marge builds a 4-foot tower of blocks on a table. The top of the tower is 4 feet below the top of the table.

```
 4
 3
 2
 1
 0
 -1
 -2
 -3
 -4
```
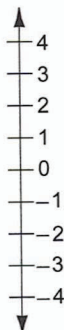
6. Johan moves down 15 meters from the top of a ladder. He is now 15 meters above the ground.

```
 30
 15
 0
 -15
 -30
```