**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Creating Equations (A.CED.2)**

When a scientist dives in salt water to a depth of 9 feet below the surface, the pressure due to the atmosphere and surrounding water is 18.7 pounds per square inch. As the scientist descends, the pressure increased linearly. At a depth of 14 feet, the pressure is 20.9 pounds per square inch. If the pressure increases at a constant rate as the scientist’s depth below the surface increases, which of the following linear models best describes the pressure *p* in pounds per square inch at a depth of *d* feet below the surface?

|  |  |  |
| --- | --- | --- |
| Statement | Yes or No | Explain your thinking |
| 1. $p=0.44d+0.77$
 |  |  |
| 1. $p=0.44d+14.74$
 |  |  |
| 1. $p=2.2d-1.1$
 |  |  |
| 1. $p=2.2d-9.9$
 |  |  |

Source:

SAT Released Items

<https://collegereadiness.collegeboard.org/sample-questions/math/calculator-permitted/19>

Problem 19, Calculator Permitted

Heart of Algebra