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| **The Oldest Pet- 6.EE.2** |
| **Domain** | **Expressions and Equations** |
| **Cluster** | **Apply and extend previous understandings of numbers to the system of rational numbers.** |
| **Standard(s)** | **6.EE.2** Write, read, and evaluate expressions in which letters stand for numbers.**6.EE.2a** Write expressions that record operations with numbers and with letters standing for numbers. *For example, express the calculation “Subtract y from 5” as 5 – y*.**6.EE.2c** Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). *For example, use the formulas V = s3 and A = 6 s2 to find the volume and surface area of a cube with sides of length s = 1/2*. |
| **Materials** | Activity sheet |
| **Task** | **The Oldest Pet**Shatzi, Buddy, and Rosie are all dogs in the neighborhood.Shatzi is three years older than half of Rosie’s age. Buddy is four years younger than double Rosie’s age.Rosie’s age can be represented by the letter *R*.Part 1:Write mathematical expressions for Shatzi’s age and Buddy’s age.Part 2:If Rosie is 4 years old, how old are Shatzi and Buddy? Part 3:Explain how you found the answers in Part 2. |

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| **Rubric** |
| **Level I** | 1. **Level II**
 | **Level III** |
| Developing Proficiency* Student uses inappropriate solution strategy and does not get the correct answer.
 | Not Yet Proficient * There are one or two errors.
 | Proficient in Performance * Accurately solves problem.
* Part 1: Shatzi: R divided by 2 + 3; Buddy: 2R - 4
* Part 2: If Rosie (*R*) = 4, Shatzi is 5 and Buddy is 4.
* Part 3: The explanation is clear and accurate.
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| **Standards for Mathematical Practice** |
| **1. Makes sense and perseveres in solving problems.** |
| **2. Reasons abstractly and quantitatively.** |
| 3. Constructs viable arguments and critiques the reasoning of others. |
| **4. Models with mathematics.** |
| 5. Uses appropriate tools strategically. |
| **6. Attends to precision.** |
| 7. Looks for and makes use of structure. |
| 8. Looks for and expresses regularity in repeated reasoning. |

**The Oldest Pet**

Shatzi, Buddy, and Rosie are all dogs in the neighborhood.

Shatzi is three years older than half of Rosie’s age.

Buddy is four years younger than double Rosie’s age.

Rosie’s age can be represented by the letter *R*.

Part 1:

Write mathematical expressions for Shatzi’s age and Buddy’s age.

Part 2:

If Rosie is 4 years old, how old are Shatzi and Buddy?

Part 3:

Explain how you found the answers in Part 2.