NAME                                              DATE                    PERIOD

# Unit 5, Lesson 3: Changing Elevation

1. Decide whether each table could represent a proportional relationship. If the relationship could be proportional, what would be the constant of proportionality?

a. Annie's Attic is giving away $5 off coupons.

| original price | sale price |
|---|---|
| $15 | $10 |
| $25 | $20 |
| $35 | $30 |

b. Bettie's Boutique is having a 20% off sale.

| original price | sale price |
|---|---|
| $15 | $12 |
| $25 | $20 |
| $35 | $28 |

(from Unit 2, Lesson 7)

2. What is the final elevation if

a. A bird starts at 20 m and changes 16 m?

b. A butterfly starts at 20 m and changes -16 m?

c. A diver starts at 5 m and changes -16 m?

d. A whale starts at -9 m and changes 11 m?

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e. A fish starts at -9 meters and changes -11 meters?

3. One of the particles in an atom is called an electron. It has a charge of -1. Another particle in an atom is a proton. It has charge of +1. The charge of an atom is the sum of the charges of the electrons and the protons. A carbon atom has an overall charge of 0, because it has 6 electrons and 6 protons and $-6 + 6 = 0$. Find the overall charge for the rest of the elements on the list.

|        | charge from electrons | charge from protons | overall charge |
|--------|-----------------------|---------------------|----------------|
| carbon | -6                    | +6                  | 0              |
| neon   | -10                   | +10                 |                |
| oxide  | -10                   | +8                  |                |
| copper | -27                   | +29                 |                |
| tin    | -50                   | +50                 |                |

4. Last week, the price, in dollars, of a gallon of gasoline was $g$. This week, the price of gasoline per gallon increased by 5%. Which expressions represent this week's price, in dollars, of a gallon of gasoline? Select **all** that apply.

   A. $g + 0.05$
   B. $g + 0.05g$
   C. $1.05g$
   D. $0.05g$
   E. $(1 + 0.05)g$

   (from Unit 4, Lesson 8)

5. Add.

   a. $14.7 + 28.9$          b. $-9.2 + 4.4$          c. $-81.4 + (-12)$          d. $51.8 + (-0.8)$