

Lesson 3 Practice Problems

1. 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?
 - e. A fish starts at -9 meters and changes -11 meters?

2. 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	

3. Add.

$14.7 + 28.9$

$-9.2 + 4.4$

$-81.4 + (-12)$

$51.8 + (-0.8)$

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. 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.)