

Lesson 2: Practice Problems

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

2. What is the final elevation if

- A bird starts at 20 m and changes 16 m?
- A butterfly starts at 20 m and changes -16 m?
- A diver starts at 5 m and changes -16 m?
- A whale starts at -9 m and changes 11 m?
- 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 a 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. $(1 + 0.05)g$

5. Add.

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