11. A large aquarium of water is being filled with a hose. Due to a problem, the sensor does not start working until sometime into the filling process. The sensor initially detects the tank has 225 liters of water in it.

a. The hose fills the aquarium at a constant rate of 15 liters per minute. What will the sensor read at the time of 7 minutes?

b. Later, someone wants to use the data to find the amount of water at times before the sensor started. What should the sensor have read at the time -5 minutes?

12. Write an equation where a number is subtracted from a variable, and a solution is -8.

$x - 15 = -23$
$+15 \quad +15$
$x = -8$

13. Write an equation where a number is multiplied by a variable and the solution (product) is –11/12.

$\frac{2}{2}x = -\frac{15}{6} \div 2$

$-\frac{15}{6} \div 2$

$-\frac{11}{6} \times \frac{1}{2} = \boxed{-\frac{11}{12}}$

14. Match each situation with an equation.

A 1. A penguin is standing 3 feet above sea level and then dives down 10 feet.
B 2. A dolphin is swimming 3 feet below sea level and then jumps up 10 feet.
F 3. A shark is swimming 10 feet below sea level and then swims up reaching 3 feet below sea level.
C 4. A sea turtle is swimming 3 feet below sea level and then dives down 10 feet.
D 5. An eagle is flying 10 feet above sea level and then dives down to 3 feet above sea level.
E 6. A pelican swimming 10 feet above sea level and then dives down reaching 3 feet below sea level.

a. $3 - 10 = a$
b. $-3 + 10 = b$
c. $-3 - 10 = c$
d. $10 - d = 3$
e. $10 - e = -3$
f. $-10 + f = -3$