**Two-Step Equations (Negative Numbers)**

Use **inverse** operation to solve equation.

– 9h – 15 = 93

 + 15 +15

– 9h + 0 = 108 🡪 $-9h = 108 \rightarrow \frac{-9h}{-9} = \frac{108}{-9} \rightarrow h= -12$

Ex. 1 - An airplane flies at an altitude of **38,000** feet. As it nears the airport, the plane begins to **descend** at a rate of **600** feet per minute. At this rate, how many minutes will the plane take to **descend** to **18,800** feet?

**Step(1): Write an equation.**

**Let “m” represent the number of minutes**

 **38,000 – 600m = 18,800**

**Step(2): Solve the equation. (\*\*\*ISOLATE THE TERM THAT CONTAINS THE VARIABLE\*\*\*)**

 **38,000 – 600m = 18,800**

 **– 38,000 – 38,000**

 **0 – 600m = – 19,200 🡪** $\frac{-600m}{-600} =\frac{\left(-19,200\right)}{-600} \rightarrow m = 32$

 **The plane will take 32 minutes to descend to 18,800 feet.**

Ex. 2 – Jenny earned **92** of a possible **120** points on a test. She **lost 4** points for each **incorrect** answer. How many **incorrect** answers did she have?

**Step(1): Write an equation.**

**Let “a” represent the number of incorrect answers**

 **120 – 4a = 92**

 **– 120 – 120**

 **0 – 4a = – 28 🡪** $\frac{-4a}{-4} = \frac{-28}{-4} \rightarrow a = 7$

 **There are 7 incorrect answers on Jenny’s test.**