**Unit 4 Day 8 – Creating and Solving Rational Equation Word Problems**

1. Nolan can eat a bag of popcorn in 2 minutes. Madison can eat a bag of popcorn in 3 minutes. If Nolan and Madison go to the movies together and share a bag of popcorn how long will it take them to finish?
   1. Create an equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Multiply by LCD of \_\_\_\_\_\_\_\_\_

* 1. Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Working together, it takes Sam, Jenna, and Francisco two hours to paint one room. When Sam works alone, he can paint one room in 𝟔 hours. When Jenna works alone, she can paint one room in 𝟒 hours. Determine how long it would take Francisco to paint one room on his own.

Multiply by LCD of \_\_\_\_\_\_\_\_\_

* 1. Create an equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  2. Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Suppose one painter can paint the entire house in twelve hours, and the second painter takes eight hours. How long would it take the two painters together to paint the house?

Multiply by LCD of \_\_\_\_\_\_\_\_\_

* 1. Create an equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  2. Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Mark can paint one hour in 8 hours. Working together with Rick, the two can paint 1 house in 6 hours. How long would it take Rick to paint the house alone?

Multiply by LCD of \_\_\_\_\_\_\_\_\_

* 1. Create an equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  2. Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Jordan can rake the family yard in 5 hours. His brother Caleb can rake the yard in 4 hours. If the two work together, how long will it take them to rake the yard?

Multiply by LCD of \_\_\_\_\_\_\_\_\_

* 1. Create an equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  2. Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Melissa walks 𝟑 miles to the house of a friend and returns home on a bike. She averages 𝟒 miles per hour faster when cycling than when walking, and the total time for both trips is 2 hours. Find her walking speed.

Multiply by LCD of \_\_\_\_\_\_\_\_\_

* 1. Create an equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  2. Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Maria can stuff envelops twice as fast as her friend Paul. Together, they can stuff 6,750 envelops in 4.5 hours. How long would it take each of them working alone?

Multiply by LCD of \_\_\_\_\_\_\_\_\_

* 1. Create an equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  2. Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Adrian can weed the garden twice as fast as his son Phillip. Together they can weed the garden in 3 hours. How long would it take them if they worked alone?

Multiply by LCD of \_\_\_\_\_\_\_\_\_

* 1. Create an equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  2. Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Rosa can jog 5 miles downhill in the same time it takes her to jog 3 miles uphill. She jogs downhill 4 miles per hour faster than she jogs uphill. What is her speed each way?

Multiply by LCD of \_\_\_\_\_\_\_\_\_

* 1. Create an equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  2. Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_