**Directions**: In small collaborative groups, work as a team to complete the following problems. Be sure that each member contributes to the discussion and has the chance to share their thoughts.

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| **Algebra Connections:** Solve the following simple equations by using the multiplicative inverse property.  1) 1/2 m = 4/5  2) 3/4m = 12/13 | **Real World Connections:**  3) Jacob used 1/7 of a liter of water to fill 1/9 of the fish aquarium. How many liters of water are needed to fill the aquarium?  4) William fills 1/3 of a water bottle in 1/6 of a minute. How much time will it take him to fill the bottle? |
| **Word Problems:**  5) Ethan writes 1/6 of a page in 1/12 of a minute. How much time does it take him to write a full page?  6) Michael plays 1/5 of a song in 1/15 of a minute. How much time will it take him to play an entire song? | **Debate**:  7) Jonathan, Will and Aiden were having a math talk and disagreed on the following problem. Read each of their reasoning and decide who is correct.  Q: Isaac used 1/4 of an ounce of nuts to make 1/12 pound of cake. How many ounces of nuts are needed to make a cake?  **Jonathan** – *The answer is 48 ounces of nuts because 4 x 12 = 48.*  **Will** – *The answer is 3 ounces of nuts. You get from 1/12 to 1 you would multiply by 12. This means that you would take ¼ and also multiply it by 12. ¼ x 12 = 3*  **Aiden** – *The answer is 1/3. You get from ¼ to 1 by multiplying by 1. This means that you would multiply 1/12 x 4 to get 4/12, which reduces to 1/3.*  Who is right and why? |