Algebra II – Day 36
Formative Ticket
Solving Word Problems with Rational Expressions

1. One water pipe can fill a tank in 10 minutes, while a second pipe can fill the same tank in 15 minutes. How long would it take to fill the tank if both pipes were working?

2. Ken can fill a bin with pluots in 20 minutes. Kristen can fill the same bin with pluots in 25 minutes. If Ken and Kristen work together, how fast can they fill the bin?

3. In order to fill his pool Jared uses two hoses. Working alone, the first hose would take 10 hours to fill the pool and the second hose would take 15 hours to fill the pool. How long will it take with both hoses filling the pool?

4. Shawn usually mowes his lawn in 5 hours. Tracy can mow the same lawn in 4 hours. How long would it take them to mow the lawn working together?

5. The air conditioner in Mr. Blakely's office can cool the room 10 degrees in 90 min. Two doors down, Mr. Burch has an office of the same size but a nicer air conditioner. That air conditioner can cool down the room 10 degrees in 60 min. If we attach both air conditioners to Mr. Blakely's office, how long would it take to cool the room 10 degrees?

30. It took Erin the same time to drive 21 miles as it took Brent to drive 15 miles. Erin's speed was 10 mph faster than Brents speed. How fast did Erin drive?

31. Jeff hiked to the top of Mt. Whitney from the trail head (a distance of 14 miles). Jon, after camping overnight on the trail, hiked only 12 miles to the top of Mt. Whitney. If Jeff and Jon were both hiking for the same amount of time, and Jon hikes 1 mph slower than Jeff, how fast did each man hike?

32. A load of stone fruit is being trucked to Los Angeles, CA from Kingsburg, CA. The truck is moving 40 mph faster than a train which is also going to Los Angeles. In the time it takes the train to travel 150 miles, the truck can travel a total of 350 miles. What is the trucks driving speed?

33. Colleen bicycles 6 km/hr faster than George. In the same time it take George to go 42 km, Colleen can go 60 km. How fast is Colleen?

34. Tom Farrell is training for another Olympic Medal. To do so, Tom swims 2 miles at a certain speed and then increases his pace by 2 mph and continues for another 12 miles. If Tom's workout lasted 4 hours, how fast was he swimming on each leg of the swim?

35. The rate of a motorcycle is 40 mph faster than the rate of a bicycle. The motorcycle travels 150 miles in the same amount of time it takes the bicycle to travel 30 miles. Find the rate of the motorcycle.