Precalc Warm Up – 9/21/10

Name:_____ Period:_____

Solve the following rate problems:

1) Mr. Monte-Sano makes 12 sandwiches per hour and works for 3 hours. How many sandwiches does he make?

2) The copy machine can make 140 copies in 4 minutes. How many copies per minute does the copier make?

Rate Problems
PROBLEM SOLVER

Name:_____Date:_____Period:_____

Students will be able to solve a variety or rate problems in context including problems with multiple rates

Let's get right to the problem solving:

Spears and McCarty paint the fence in the green space. Mr. Spears paints at a rate of 10 feet per hour and Mr. Mc Carty paints at a rate of 8 feet per hour. If they start working at the same time, how much fence will each man paint in 3 hours?

Let's consider a new but similar problem:

Now, Spears and McCarty start painting at opposite ends of the fence and work towards each other. How long will it take until they reach each other?

Two trains depart at the same time, one from DC and another from New York. The distance between New York and DC is 360 miles. The train leaving DC travels at 50 miles per hour and the train leaving New York travels at 40 miles per hour. How long will it take before the two trains meet?

Two planes depart at the same time, one from LA and another from DC. The distance between New York and DC is 3200 miles. The plane leaving DC travels at 300 miles per hour and the train leaving LA travels at 500 miles per hour. How long will it take before the two planes meet?

Two cafeteria workers serve lunches to students. The first server serves at a rate of 6 students per minute and the second serves students at a rate of 4 students per minute. How long will it take them to serve 410 students?

Here's another kind of problem:
Ms. Heinegg and Ms. Hanna have a running race. They know that Ms. Hanna is faster so Ms. Heinegg gets a head start. Ms. Hanna runs at a rate of 8 meters/second and Ms. Heinegg runs at a rate of 6 meters/second. How long will it take Ms. Hanna to catch Ms. Heinegg if Ms. Heinegg gets a 10 meter head start?

Mr. Monte-Sano is late for the start of his bike race. The other competitors are 200 meters from the start line when Mr. M starts riding. But, Mr. M travels at 50 meters per second while the other competitors travel at 45 meters per second. When will Mr. M catch up?

And here's another type of problem:
After painting together all day Spears and McCarty are sick of each other. When they finish they walk in opposite directions. Spears walks at a rate of 8 meters per second and McCarty walks at a rate of 7 meters per second. How long will it take until they are 1500 meters apart?

After painting together all day Spears and McCarty are sick of each other. When they finish they walk in opposite directions. Spears walks at a rate of 8 meters per second and McCarty walks at a rate of 7 meters per second. How far apart are they after 50 seconds?

Precalc – Exit Slip – 9/21/10

Name:_____ Period:_____

1) Mr. Monte-Sano plays basketball in the alley with Karim. Karim gives Mr. Monte-Sano a 24 basket head start. Karim scores 7 baskets per minute while Mr. Monte-Sano scores only 3 baskets per minute. How many minutes will it take until Karim and Mr. Monte-Sano have the same number of baskets?

   a) 6 minutes

   b) 3.4 minutes

   c) 8 minutes

   d) 2.4 minutes