7th Grade Seal Quiz 1

Miss Pesco

Name _____

Period _____   Date _____

Over the summer The Seal trained for the Olympics! The Seal wanted to compete in the Marathon Swimming event. This event is a very long swim in the ocean, where the competitors must swim 10,000 meters. To train for the event, The Seal swam 30,000 meters once every morning and once every evening for 111 days! All together this was 75,291 minutes and 18 seconds of swimming!

Since 1 minute has 60 seconds, this is a ratio of 1 / 60. So to convert 18 seconds into a unit of minutes, what fraction or ratio would you use?

Next, what was The Seal's average speed during all of his training? Try to express the speed in terms of how many meters per minute The Seal was swimming.

Unfortunately, The Seal strained his fin just before the Olympics and he could not compete.
The top finishers in the Olympic Marathon Swimming event were as follows:

Ferry Weertman	Gold Medal	112 minutes 59.8 seconds
Spiros Gianniotis	Silver Medal	112 minutes 59.9 seconds
Oliver Marc-Antoine	Bronze Medal	113 minutes 2.0 seconds
Zu Lijun	Fourth Place	113 minutes 2.1 seconds
Jordan Wilimovsky	Fifth Place	113 minutes 3.2 seconds
Simone Ruffini	Sixth Place	113 minutes 3.5 seconds
Federico Vanelli	Seventh Place	113 minutes 3.9 seconds
Yasunari Hirai	Eight Place	113 minutes 4.6 seconds
Christian Reichert	Ninth Place	113 minutes 4.7 seconds
Chad Ho	Tenth Place	113 minutes 4.8 seconds

Knowing The Seal's average training speed in meters per minute. How long would it have taken him to swim the 10,000 meter race if he swam at his training speed?

Would The Seal have won the race? If not, what place would he have finished?

Finally, lets imagine that regardless of where The Seal would have finished at his training speed, he was friends with Oliver Marc-Antoine and wanted to tie his friend.

For every 1,000 meters of the race, how much faster or slower would The Seal have to swim to finish at the same time as his friend? For example, if The Seal's training pace was 114 minutes for every 10,000 meters, he would have been 58 second slower than Oliver. He would have had to go 5.8 seconds faster than his training pace every 1,000 meters to tie Oliver by the end of the race. Use the actual speed that you calculated The Seal's pace to be, and find out how many seconds faster or slower he would have to have gone during each 1,000 meters to tie Oliver.