Selected Solutions **Day 19 HW: Quiz Practice**

1a. $x = 7/6$ 1b. $x = 4$

2. 12.5 miles per hour

3. 6 minutes

4. $3\frac{1}{3}$ hours Suggestion: First figure out what fraction of the car was completed when Bill and Ted were working together

5. 4 hours

Try either setting up a table or guess/check/generalize

Here's g/c/g:

1. Guess: Stuck in traffic for 3 hours so not stuck in traffic for 6 hours
   Traffic: 120 miles in 3 hours means 120/3 = 40 mph
   Non-Traffic: 300 miles in 6 hours means 300/6 = 50 mph

2. Check: Non traffic speed is supposed to be double traffic speed.
   But, $50 \neq 2(40)$

3. Generalize: Stuck in traffic for *t* hours. So, not stuck in traffic for *9 – t* hours.
   Traffic: 120 miles in *t* hours means 120/t mph
   Non-Traffic: 300 miles in *9 – t* hours means 300/9-t mph

   Since non traffic speed is double traffic speed we have:

$$2\left(\frac{120}{t}\right) = \frac{300}{9-t}$$ Shazam!!!