EXTRA PRACTICE — Exercises

Unit VI – Second Degree Relations and Higher - Algebraic Fractions
Part C – Problem Solving with Algebraic Fractions
Lesson 2 – "Work" Problems

For each of the following story problems, find the fractional equation needed to solve. Then solve and use common sense to check your answer.

1. Bill can do a job in fifteen hours. Sue can do the same job in ten hours. If Sue were to join Bill three hours after he had begun, what would be the total time needed to do the job?

2. It takes Sherrie five hours to paint a room. Derrick can do the job in ten hours. How long would it take them to do the job if they work together?

3. Working together, Mr. Thomason and his son can paint a house in four weeks. It takes Mr. Thomason twice as long as it takes his son to do the job alone. How long would it take each to do the job alone?

4. A large pipe can fill a tank in five hours, and a smaller one can fill a tank in eight hours. A drain pipe can empty the tank in ten hours. If all three pipes are left open, what is the total time needed to fill the tank?

5. Working together, Lon, Nick, and Barry can wallpaper an apartment in twenty hours. Barry can do the job by himself in thirty-five hours, and Lon can do the job alone in twice the time it would take Nick working alone. Find the time it would take Nick to do the job working alone?

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1. $8\dfrac{5}{11}$ hours

2. $3\dfrac{1}{3}$ hours

3. 6 days - Son's Time
    12 days - Mr. Thomason's Time

4. $4\dfrac{4}{9}$ hours

5. 70 hours