Extra Rational Equation Word Problems   Date:

1. Alice can wash and wax her car in 3 ½ hours. If Bernice helped her, Alice could do the job in 2 hours. How long would it take Bernice working alone to do the job?

2. To do a job alone, it would take Dan 6 hours, Fran 2 hours and Stan 3 hours. How long would it take to do the job if they all worked together?

3. If they worked together, Mark, Naomi, and Yvonne can sort some library books in 1 ½ hours. Working alone, it would take Yvonne 5 hours, and Mark 6 hours to do the same job. How long (to the nearest quarter of an hour) would it take Naomi, if she worked alone?

4. Mr. Jenkins can dig a ditch in one hour less time than his son. Working together, they can do the job in 2/3 hour. How long does it take Mr. Jenkins to the job alone?

5. Mr. Richards spends 5 hours on a consulting job and Ms. Samuels spends 7 hours on the same job. They are paid a total of $600. How should the money be divided so that each receives the correct share?

6. The sum of a number and four times its reciprocal is 4. What is the number?

7. A sightseeing bus travels 40 miles to a scenic overlook. The rate returning is twice the rate going, and the travel time for the round-trip is 2 hours. Find the rate for the return part of the trip.

8. A jet flies 852 miles with a tailwind in half the time it takes to fly 1560 miles against the same wind. Find the jet's speed, if the wind speed is 18 miles/hour.

Answers:

1. $4\frac{2}{3}$ hrs   2. 1 hr   3. $3\frac{1}{4}$ hrs   4. 1 hr

5. $250/ $350   6. 2   7. 60 mph   8. 408 mph