

Lesson 30 examples

Example 1. A pleasure boat sets out for a cruise on a river, sailing upstream 21 miles and then turning around and returning to port. The trip upstream requires 105 minutes and the trip downstream requires 57 minutes. Find the speed of the boat in still water and the speed of the current in miles per hour.

Example 2. Rex works a total of 80 hours per week at two jobs. If his total pay is \$887.25 (before taxes), and Rex worked 45 hours at Mudzoff Car Wash and 35 hours at Stuck-in-the-Mud is \$2.15 more than his hourly rate at Mudzoff, find Rex's pay per hour at each job.

Example 3. Ken and Bud worked together painting a house, and the job required 7.2 hours to complete. On an identical house in the same neighborhood, Ken and Bud worked together for 4.0 hours, before Bud had to leave for a dentist's appointment. Ken completed painting the house after 6.5 more hours. How long would it take each of the painters to complete painting the house alone?

Example 4. What quantities of silver 62.3% pure and 51.9% pure must be mixed together to give 12.6 grams of silver 57.4% pure?