



Diary of a Martian

Use the information to solve rate problems about living on Mars.

- 1** When working in the GreenHab, it takes me 120 minutes to repot 20 tomato plants. How many plants can I repot in 30 minutes?
- 2** My crewmate Renee can fill 1 test tube with “Martian” soil in 2 minutes. How many test tubes can she fill in 10 minutes?
- 3** **A.** At top speed, most of our rovers can travel 7.5 miles in 30 minutes. At that rate, how long will it take the rover to travel 20 miles?
- 3B.** To be more fuel efficient, the rovers should go slower, traveling 2.5 miles in 15 minutes. How much longer will it take to go 20 miles in a rover when trying to conserve fuel than at top speed?
- 4** **A.** Sarah Jane, the crew artist, has a fancy 360-degree camera. She can walk at a rate of 2 miles per hour when carrying it. How long would it take her to walk to her favorite filming location, which is 3 miles away?
- 4B.** If Sarah Jane films for 30 minutes, how long would her total round trip last?
- 4C.** An EVA can be 5 hours long at most. Is her trip possible?
- 5** **A.** If 3 of the crew each need 3,000 calories of food per day and the other 3 each need 2,500 calories per day, how many total calories would they need for a 2-week-long mission?
- 5B.** For a 2-year-long mission?