Name

5-6 Lesson Master

Questions on SPUR Objectives
See Student Edition pages 339–343 for objectives.

SKILLS Objective C

In 1 and 2, a rational equation is given.

a. Name the LCD for the fractions in the equation.

b. Use the LCD to solve the equation.

1. $\frac{2}{a} + 3 = \frac{14}{5 - a}$ a. _____

b. _____

2. $\frac{3b}{b+1} + \frac{1}{b-1} = \frac{2b^2}{b^2-1}$ a. _____

b. _____

In 3–5, solve the equation.

3. $\frac{2}{p+2} - 4 = \frac{10}{p+2}$

_____

4. $\frac{1}{2j^2} + \frac{1}{6j^2} = 6$

_____

5. $\frac{n+4}{n+2} + \frac{5}{n+3} = \frac{-1}{n^2+5n+6}$

_____

USES Objectives K and L

6. Baseball legend Babe Ruth had a career batting average of .342, with 2873 hits out of 8398 at-bats, while another baseball great, Willie Mays, had a career batting average of .302, with 3283 hits out of 10,881 at-bats . Suppose Willie Mays had played some additional seasons, and had n more at-bats before he retired. Find a rational expression in terms of n for the batting average b he would have needed over those n at-bats in order to match Ruth's average.

_____

7. Over his first four seasons with the Chicago Blackhawks, Duncan Keith scored 31 goals out of his 577 shots on the goal, for a shooting percentage of 5.4%. Suppose he takes s more shots on the goal over the course of his career. Write a rational expression for p, the shooting percentage he would need over those s shots to raise his career shooting percentage to 8.2%.

_____

8. Ron is running 400-m laps on a track. On the north half of the track, he is running into a 7 meters-per-second headwind. On the south half of the track, he is running with the same wind at his back. It takes him 1 minute and 15 seconds to run the north half of the track, and it takes him 1 minute and 3 seconds to run the south half. Assuming he is running at a constant speed relative to still air, find that speed in meters per second.

_____

9. A plane flies 962 miles from Dallas to Orlando, then flies back. There was a 35-mph wind blowing from Orlando to Dallas. If the entire trip took 6 hours, how fast was the plane traveling relative to still air?

_____