

Name _____

12-8A Lesson Master**Questions on SPUR Objectives**

See pages 773–775 for objectives.

SKILLS Objective D1. *Multiple Choice.* Which is a rational expression? _____

A $\sqrt{x+3}$

C $\frac{4x^3}{x+5}$

B $x^2 - 5x + 6$

D $(x-1)^3$

In 2–5, simplify the rational expression and indicate all restrictions on values of the variables.

2. $\frac{m^2 + 9m + 14}{m + 2}$ _____

3. $\frac{2a^2 + 11a + 15}{a^2 - 9}$ _____

4. $\frac{5n^2 + 21n + 4}{10n^2 - 13n - 3}$ _____

5. $\frac{3r^2 - 6r - 72}{6r^3 + 54r^2 + 120r}$ _____

6. *True or false.* $\frac{9p^2 - q^2}{pq} = 9p - q$ _____

7. Given $\frac{3}{a+4} + \frac{2}{a-2}$.

a. What is the common denominator? a. _____

b. Write as a single rational expression and give the restrictions on the variable. b. _____

In 8–11, write as a single rational expression and give the restrictions on the variable.

8. $\frac{3}{x+6} + \frac{5}{x+6}$ _____

9. $\frac{n}{n-4} - \frac{3}{2n}$ _____

10. $\frac{4s}{s^2 + 2s - 3} + \frac{6}{s+3}$ _____

11. $\frac{3m}{m^2 + 6m - 16} + \frac{7}{m^2 + 8m - 20}$ _____