Name: _____ **Class:** _____ **Date:** _____ **ID: A**

Algebra Ch.10/11 Practice Test (10-1 through 10-4, 11-1, 11-2)

Simplify the rational expression.

1. $\frac{5x - 15}{5x + 35}$

2. $\frac{x^2 + 4x - 21}{x^2 + x - 42}$

Multiply.

3. $\frac{y^2 - 4}{5y} \cdot \frac{2y}{y - 2}$

Divide.

4. $\frac{s^2 + 4s}{s^2 + 6s + 8} \div \frac{s - 3}{s + 2}$

Simplify the radical expression.

5. $3\sqrt{50}$

6. $\sqrt{75a^2}$

7. $-2\sqrt{2p} \cdot 2\sqrt{22}$

8. $\sqrt{\frac{10}{81}}$

Simplify the radical expression by rationalizing the denominator.

9. $\frac{4}{\sqrt{3}}$

Simplify the expression.

10. $5\sqrt{10} + 4\sqrt{10}$

11. $7\sqrt{2} - \sqrt{18}$

Solve the equation. Check your solution.

12. $9 = \sqrt{g} + 5$

13. $\sqrt{q - 10} = 3$

14. $\sqrt{11x - 8} = \sqrt{10x + 5}$

Solve the equation. Identify any extraneous solutions.

15. $x = \sqrt{-3x + 40}$

Algebra Ch.10/11 Practice Test (10-1 through 10-4, 11-1, 11-2)
Answer Section

1. ANS:
$\frac{x-3}{x+7}$

   REF: 11-1 Simplifying Rational Functions
2. ANS:
$\frac{x-3}{x-6}$

   REF: 11-1 Simplifying Rational Functions
3. ANS:
$\frac{2(y+2)}{5}$

   REF: 11-2 Multiplying and Dividing Rational Expressions
4. ANS:
$\frac{s}{s-3}$

   REF: 11-2 Multiplying and Dividing Rational Expressions
5. ANS:
$15\sqrt{2}$

   REF: 10-1 Simplifying Radicals
6. ANS:
$5a\sqrt{3}$

   REF: 10-1 Simplifying Radicals
7. ANS:
$-8\sqrt{11p}$

   REF: 10-1 Simplifying Radicals
8. ANS:
$\frac{\sqrt{10}}{9}$

   REF: 10-1 Simplifying Radicals
9. ANS:
$\frac{4\sqrt{3}}{3}$

   REF: 10-1 Simplifying Radicals

10. ANS:
$9\sqrt{10}$

REF: 10-3 Operations With Radical Expressions

11. ANS:
$4\sqrt{2}$

REF: 10-3 Operations With Radical Expressions

12. ANS:
16

REF: 10-4 Solving Radical Equations

13. ANS:
19

REF: 10-4 Solving Radical Equations

14. ANS:
13

REF: 10-4 Solving Radical Equations

15. ANS:
5 is a solution to the original equation. The value –8 is an extraneous solution.

REF: 10-4 Solving Radical Equations