

## Alg 1 Tuesday Week 13

## Warm Up

Simplify each expression.

1.  $\sqrt{3}(2-4\sqrt{2})$

2.  $\frac{x^2 - 3x - 4}{x^2 - 16}$

3.  $\frac{18 \pm 18\sqrt{27}}{9}$

4.  $\frac{2x^2 + 7x}{2x^2 + 3x - 14}$

5.  $3\sqrt{3} - \sqrt{3} + 3$

6.  $\frac{15 - 5t}{t^2 - t - 6}$

7. Multiply and Simplify:

$$\sqrt{5}(3\sqrt{5} - 2)$$

## Notes 11-2 Multiplying and Dividing Rational Expressions

**Problem 1** Multiplying Rational Expressions

What is the product?

**A**  $\frac{6}{a^2} \cdot \frac{-2}{a^3}$

**B**  $\frac{x-7}{x} \cdot \frac{x-5}{x+3}$

**Got It?** 1. What is the product?

a.  $\frac{5}{y} \cdot \frac{3}{y^3}$

b.  $\frac{x}{x-2} \cdot \frac{x+1}{x-3}$

**Problem 2** Using FactoringWhat is the product  $\frac{x+5}{7x-21} \cdot \frac{14x}{x^2+3x-10}$ ?**Got It?** 2. What is the product  $\frac{3x^2}{x+2} \cdot \frac{x^2+3x+2}{x}$ ?**Problem 3** Multiplying a Rational Expression by a PolynomialWhat is the product  $\frac{2m+5}{3m-6} \cdot (m^2 + m - 6)$ ?**Got It?** 3. What is the product?

a.  $\frac{2x-14}{4x-6} \cdot (6x^2 - 13x + 6)$

b.  $\frac{x^2+2x+1}{x^2-1} \cdot (x^2+2x-3)$

## HW p 667: 10, 21, 24, 32, 35

Simplify each expression.

10.  $\frac{2m - 5}{6m - 15}$

21.  $\frac{b^2 + 8b + 15}{b + 5}$

24.  $\frac{12 - 4t}{t^2 - 2t - 3}$

32.  $\frac{7z^2 + 23z + 6}{z^2 + 2z - 3}$

35.  $\frac{3z^2 + 12z}{z^4}$

## p 674: 11, 17, 19, 22, 23, 27

Multiply.

11.  $\frac{7}{3} \cdot \frac{5x}{12}$

19.  $\frac{r^2 + 5r + 6}{2r} \cdot \frac{r - 2}{r + 3}$

22.  $\frac{4x + 1}{5x + 10} \cdot \frac{30x + 60}{2x - 2}$

17.  $\frac{4c}{2c + 2} \cdot \frac{c^2 + 3c + 2}{c - 1}$

27.  $\frac{h - 1}{6h + 3} \cdot (2h^2 + 9h + 4)$

23.  $\frac{4t + 4}{t - 3} \cdot (t^2 - t - 6)$