



Multiplying Rational Expressions

Version 2

Name: _____

Date: _____

Score: _____

Direction: Simplify by multiplying the following rational expressions. Show all your work in the space provided.

$$1) \frac{4x^2 - 12x}{x - 8} \cdot \frac{3x - 24}{6x - 18}$$

$$2) \frac{x^2 + 2x}{x + 3} \cdot \frac{x^2 - 9}{-x - 2}$$

$$3) \frac{8x^2}{x^2 + 6x - 7} \cdot \frac{x + 7}{4x}$$

$$4) \frac{3x - 1}{4x} \cdot \frac{2x + 2}{3x^2 + 2x - 1}$$

$$5) \frac{7x^2 - 19x - 6}{x^2 - 6x + 9} \cdot \frac{x}{7x + 2}$$

$$6) \frac{12x^2 - 13x - 4}{4x^2 + 5x + 1} \cdot \frac{x^3 - x}{9x^2 - 12x}$$



Multiplying Rational Expressions

Name: _____

Date: _____

Score: _____

Direction: Simplify by multiplying the following rational expressions. Show all your work in the space provided.

1)
$$\frac{4x^2 - 12x}{x - 8} \cdot \frac{3x - 24}{6x - 18}$$

$$2x$$

2)
$$\frac{x^2 + 2x}{x + 3} \cdot \frac{x^2 - 9}{-x - 2}$$

$$-x^2 + 3x$$

3)
$$\frac{8x^2}{x^2 + 6x - 7} \cdot \frac{x + 7}{4x}$$

$$\frac{2x}{x - 1}$$

4)
$$\frac{3x - 1}{4x} \cdot \frac{2x + 2}{3x^2 + 2x - 1}$$

$$\frac{1}{2x}$$

5)
$$\frac{7x^2 - 19x - 6}{x^2 - 6x + 9} \cdot \frac{x}{7x + 2}$$

$$\frac{x}{x - 3}$$

6)
$$\frac{12x^2 - 13x - 4}{4x^2 + 5x + 1} \cdot \frac{x^3 - x}{9x^2 - 12x}$$

$$\frac{x - 1}{3}$$