Unit 11.2 Multiplying and Dividing Rational Expressions

1. Multiply the following rational expressions and simplify as much as possible

   a. $\frac{3ax^2}{4b} \times \frac{6b^2}{27x^2y}$

   b. $\frac{(x-2y)^2}{x^2-5xy+6y^2} \times \frac{x+2y}{x^2-4xy+4y^2}$

   c. $\frac{4x^2-8x-5}{4x-4} \times \frac{x-1}{4x^2-25}$

2. Divide the following rational expressions and simplify as much as possible

a. $\frac{6x^2 - 7x - 3}{x^2 - 1} \div \frac{2x - 3}{x - 1}$

b. $\frac{x^2 + 5x + 6}{x^2 - 2x - 3} \div \frac{4x + 12}{x - 3}$

c. $\frac{x^2 - 8x + 15}{x^2 - 9x + 14} \div \frac{x^2 + 4x - 21}{x - 1}$

d. $\frac{15x^2 + 11x + 2}{5x + 15} \div \frac{3x^2 - 20x - 7}{x + 3}$