Unit 11.1 Introduction to Rational Expressions

1. Find the LCM of the following sets

   a. $\{16y^5w^7u^6 , 3y^4w^3\}$

   b. $\{3w^3x^8 , 2y^4w^5x^2\}$

2. State any restrictions on the following $(x \neq ?)$

   a. $\dfrac{5}{3x - 1}$

   b. $\dfrac{x^2 - 4}{x^2 - 5x - 6}$

3. Reduce to the lowest terms and state any restrictions

   a. $\dfrac{9x^2y^3}{12xy^4}$

b. $\dfrac{9 - 3x}{4x - 12}$

c. $\dfrac{xy - 3y + 2x - 6}{y^2 - 4}$

d. $\dfrac{6x^2 + 4x}{3xy + 2y}$

e. $\dfrac{2x - 10}{3x - 15}$

f. $\dfrac{x^3 - 64}{x^2 - 16}$

g. $\dfrac{7(3y + 4)(y + 4)}{35(y - 3)(3y + 4)}$

h. $\dfrac{14(x - 4)^5(2x - 7)^2}{21(2x - 7)^4(x - 4)^3}$

i. $\dfrac{x^2 + 12x + 36}{x + 6}$