Name: _____   Date: _____

Learning Goal 0.2	Expectations for algebra from previous years.

More Questions

1. Fully factor the following expressions.

   a. $x^2 - 18x + 72$
   b. $x^4 + 2x^2 - 24$
   c. $m^2 - 14m + 24$
   d. $36x^2 + 12x + 1$
   e. $144 - n^8$
   f. $20 + 8n - n^2$
   g. $x^2 + 11x - 80$
   h. $11p - p^2 - 24$
   i. $6y^2 + 5y - 6$
   j. $24x^2 - 20x - 24$
   k. $162v^4 - 2w^4$
   l. $21 + 66x + 9x^2$
   m. $2x^2 + 5xy + 2y^2$
   n. $16b^2 + 60b - 100$
   o. $4b^2 - 35ab + 49a^2$
   p. $8x^2 - 26x + 15$
   q. $6x^2 - 17x + 5$
   r. $4x^4 - 21x^2 - 18$
   s. $27x^3 - y^6$
   t. $(x + 2)^3 + (x - 2)^3$
   u. $2xy - 2xz - 3y^2 + 3yz$
   v. $x^2 + 6x + 9 - 4y^2$
   w. $x^{5/2} - 3x^{3/2} + 2x^{1/2}$
   x. $x^{20/3} + x^{11/3} - 2x^{2/3}$
   y. $4x^{1/3} - 3x^{-2/3} - x^{-5/3}$
   z. $4x^2y^4 - 36x^4y^2$

2. Simplify the following rational expressions. State any restrictions on the domain.

   a. $\dfrac{x - 3 + \dfrac{2}{x}}{x - 4 + \dfrac{3}{x}}$

   b. $\dfrac{\dfrac{x^3 + 27}{x^2 - 9}}{\dfrac{x^2 - 3x + 9}{x + 3}}$

   c. $\dfrac{\dfrac{1}{x - y} - \dfrac{1}{x + y}}{\dfrac{2}{x^2 - y^2}}$

   d. $x - \dfrac{1 + x}{1 - x^2}$