Act. #29 Simplifying Rational Expressions

* Simplify the following.

1) $\dfrac{16x^2-49}{12x+21}$

2) $\dfrac{2x^3+8x^2+5x+20}{2x^3-32x}$

3) $\dfrac{x^3-27}{5x^2-15x}$

4) $\dfrac{5x^2-20}{3x^3+24}$

5) $\dfrac{2x^2-13x+21}{2x^3-7x^2+10x-35}$

6) $\dfrac{2x^3-6x^2+2x-6}{4x^3-108}$

7) $\dfrac{27x^4+64x}{6x^2-x-12}$

8) $\dfrac{4x^2-100}{8x^3+8x^2-160x}$

9) $\dfrac{5x^3+40}{5x^2-10x+20}$

10) $\dfrac{9x^2-25}{6x^2-26x-60}$

11) $\dfrac{x^3-xy^2}{2x^3+2x^2y}$

12) $\dfrac{24x^4y-54x^3y}{6x^2y+9xy}$