MAT 104 Quiz 13

Wednesday, October 13, 2004

1. Divide

$$\frac{16x^4 + 12x^3 + 20x}{4x}$$

Divide every term in the polynomial by the monomial $4x$.

$$\begin{aligned}\frac{16x^4 + 12x^3 + 20x}{4x} &= \frac{16x^4}{4x} + \frac{12x^3}{4x} + \frac{20x}{4x} \\ &= 4x^3 + 3x^2 + 5\end{aligned}$$

2. Divide

$$\frac{8x^2y^5 - 36x^5y^9}{4x^2y^3}$$

$$\begin{aligned}\frac{8x^2y^5 - 36x^5y^9}{4x^2y^3} &= \frac{8x^2y^5}{4x^2y^3} - \frac{36x^5y^9}{4x^2y^3} \\ &= 2y^2 - 9x^3y^6 \\ &= -9x^3y^6 + 2y^2\end{aligned}$$

3. Divide

$$\frac{3x^3 + 10x^2 + 9x + 2}{x + 2}$$