Quiz 2 Period 6  AK

* Test was not graded but here are the solutions.

1) \((2m+n-3)(2m-n+3)\)
\((2m+(n-3))(2m-(n-3))\)
\(2m \cdot 4m^2 - (n-3)^2\)
\(4m^2 - ((n-3)(n-3))\)
\(4m^2 - (n^2 - 6n + 9)\)
\(4m^2 - n^2 + 6n - 9\)

2) TYPO, should be \(x^3\)
\(x^3 - 3x^2 + 3x - 1\)

Used rules of cubic polynomials in notes.

This follows the formula for \((x-y)^3\)
\((x-1)^3\)
\[ x^3 - 3x^2 + 3x - 1 \]
\[ (x-1)(x-1)(x-1) \]
\[ (x^2 - 2x+1)(x-1) \]
\[ x^3 - 2x^2 + x - x^2 + 3x - 1 \]
\[ x^3 - 3x^2 + 3x - 1 \]

3) \[ 3y^4 - 27y^2 \]
\[ 3y^2(y^2 - 9) \]
\[ 3y^2(y-3)(y+3) \]