

## 6 Quiz 6 MAT 1275 Professor Chiu

Name: \_\_\_\_\_

- This quiz consists of **1** questions for a total of **10** points.
- You have **10** minutes to complete the quiz.
- Show all work and justify your answers.
- Scientific calculators are allowed.
- Wishing you success.

• " $-2x+1$ " is a two-term divisor  $\Rightarrow$  long division

1. Divide  $-2x^3 + 3x^2 + x - 1$  by  $-2x + 1$ .

$$\begin{array}{r}
 \phantom{-2x+1} \overline{) -2x^3 + 3x^2 + x - 1} \\
 \underline{-(-2x^3 + x^2)} \phantom{-1} \\
 2x^2 + x \phantom{-1} \\
 \underline{-(2x^2 - x)} \phantom{-1} \\
 2x - 1 \\
 \underline{-(2x - 1)} \\
 0
 \end{array}$$

$x^2 \begin{array}{|l} -2x+1 \\ \hline -2x^3 \quad x^2 \end{array}$   
 $-x \begin{array}{|l} -2x+1 \\ \hline 2x^2 \quad -x \end{array}$   
 $-1 \begin{array}{|l} -2x+1 \\ \hline 2x \quad -1 \end{array}$

$$(-2x^3 + 3x^2 + x - 1) = (-2x + 1)(x^2 - x - 1)$$