MAC1147 Fall 2014
Quiz 1   Name: _____

UFID: _____

Solve 3 of 5 questions below in order to get your full mark. Please notice that the difficulty
of each question depends on how students handle it. I only consider 3 questions for your final
grade. Using calculators are forbidden and will be considered as an act of cheating. You have
15 minutes for this quiz. Good luck to all of you!

1 PROBLEM ONE
Evalute the expression.

$$\frac{|2x+1|}{2x+1} \qquad for \qquad x > -2 \tag{1}$$

2 PROBLEM TWO
Evaluate the expression for given value

$$36x^{-2} + 3x^2 \qquad for \qquad x = 3 \tag{2}$$

3 PROBLEM THREE
Rationalize the denominator of the expression. Then simplify your answer

$$\frac{2}{\sqrt{5} - \sqrt{3}}$$
(3)

4 PROBLEM 4
Simplify each radical expression

$$\sqrt[4]{3x^4y^2}$$
(4)

5 PROBLEM5
Factor the expression as completely as possible

$$x^{3n} + y^{3n} \qquad where \quad n \quad is \quad any \quad natural \quad number$$
(5)