

EXAM 2 - MTH 099 INTERSESSION 2011

MTH 099

19 May 2011

Instructor: Thomas Cuchta

Total Points: 100 (11 + 1 free)

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

**Read the following before starting the exam:**

- On the following page, please mark **nine of the following eleven questions** that you wish me to grade. If you mark nothing, I will grade numbers 1-9. If you mark more than 9, I will grade only the first nine marked problems.
- Show all work, clearly and in order, if you want full credit. I reserve the right to take off points if I cannot see how you arrived at your answer.
- Justify your answers as much as possible to ensure full credit.
- Partial credit will be awarded for incomplete answers.
- **Circle or otherwise indicate your final answers.**
- Please keep your answers brief; be clear and to the point.
- Good luck!

Please mark ***nine out of the eleven*** problems you would like me to grade.

Problem Number	Grade it?
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

1.) Identify the greatest common factor (GCF) for each set of terms.

a.)  $30, 45$

b.)  $5a^2b^4, 15a^3b^2$

2.) Factor out the GCF.

a.)  $12x + 6y$

b.)  $3a^2b + 6ab^2$

3.) Factor the following trinomials.

a.)  $x^2 + 2x + 1$

b.)  $x^2 + 11x + 30$

4.) Factor the binomial.

a.)  $x^2 - 64$

b.)  $x^4 - 16$

5.) Simplify.

a.)  $\sqrt{x^8}$

b.)  $\sqrt{x^2y^3z^7}$

6.) Multiply the expressions and simplify.

a.)  $(-3\sqrt{5})(9\sqrt{7})$

b.)  $(2\sqrt{x} + 5\sqrt{y})(9\sqrt{x} - \sqrt{y})$

7.) Simplify.

a.)  $(36)^{1/2}$

b.)  $(16)^{1/4}$

8.) Simplify.

a.)  $(8)^{2/3}$

b.)  $(9)^{3/2}$

9.) Do each part.

a.) Write the expression  $(15x^4)^{1/9}$  as a radical.

b.) Write the expression  $\sqrt[7]{73x^4y^2}$  using rational exponents.

10.) Do each part.

a.) Find the prime factorization of 72.

b.) Simplify  $\sqrt{72}$ .

11.) Solve each equation.

a.)  $5x = 15$

b.)  $6x = 18$