MTH 127 Spring 2020 Mrs. Bledsoe Name_____

PRACTICE for MTH 127 Final Exam Spring 2020

Date_____ Period____

Simplify. Your answer should contain only positive exponents.

1) $\left(-\frac{n^{-1} \cdot m^2}{nm^0}\right)^0$

2) $-\frac{vu^4}{(-u)^{-4} \cdot -u^{-2}v^3}$

Simplify each expression.

3) $(4x - 1 - 2x^2) - (8 + 6x - 4x^2)$

Evaluate each function at the given value.

4) $f(a) = a^3 - 4a^2 - 7a + 21$ at $a = -2$

5) $f(n) = n^4 - 6n^2 + 8n - 10$ at $n = 2$

Factor each completely.

6) $96xy - 12x - 32y^2 + 4y$

7) $n^2 + 16n + 60$

8) $54n^2 + 294n - 180$

9) $x^3 - 3x^2 - x + 3 = 0$

10) $x^2 - 4x + 4 = 0$

11) $x^4 - x^2 - 2 = 0$

Simplify.

12) $(3 - 5i) - (-3 + 3i)$

13) $(6 - 2i) + (5 - 8i)$

14) $(-3 - 6i)(5 + 4i)$

15) $(7 + i)^2$

16) $\dfrac{i}{-8 - i}$

17) $\dfrac{5 - 8i}{-8 + 3i}$

18) $-\dfrac{10}{-4 - \sqrt{7}}$

19) $\dfrac{\sqrt{2}}{6\sqrt{6}}$

20) $\dfrac{-10 - \sqrt{6}}{9\sqrt{34}}$

21) $\dfrac{4}{7 - 5\sqrt{5}}$

Answers to PRACTICE for MTH 127 Final Exam Spring 2020

1) 1

2) $\frac{u^{10}}{v^2}$

3) $2x^2 - 2x - 9$

4) 11

5) -2

6) $4(3x - y)(8y - 1)$

7) $(n + 10)(n + 6)$

8) $6(n + 6)(9n - 5)$

9) $(x - 3)(x - 1)(x + 1) = 0$

10) $(x - 2)^2 = 0$

11) $(x^2 - 2)(x^2 + 1) = 0$

12) $6 - 8i$

13) $11 - 10i$

14) $9 - 42i$

15) $48 + 14i$

16) $\frac{-8i - 1}{65}$

17) $\frac{-64 + 49i}{73}$

18) $\frac{40 - 10\sqrt{7}}{9}$

19) $\frac{\sqrt{3}}{18}$

20) $\frac{-5\sqrt{34} - \sqrt{51}}{153}$

21) $\frac{-7 - 5\sqrt{5}}{19}$