7   Quiz 7 MAT 1275 Professor Chiu

Name: _____

- This quiz consists of **3** questions, each worth for a total of **10** points.
- You have **15** minutes to complete the quiz.
- Show all work and justify your answers.
- Scientific calculators are allowed.
- Wishing you success.

1. (3pt) Factor the GCF for the following: $8x^2y^3 - 16x^3y + 12xy^2$

$$= 4xy(2xy^2 - 4x^2 \cdot 1 + 3 \cdot 1 y) \Rightarrow \boxed{\text{The GCF is } 4xy}$$

$$= \boxed{4xy}(2xy^2 - 4x^2 + 3y)$$

$$x^2 \quad x^3 \quad x$$

$$\Rightarrow \text{common factor: } x$$

$$y^3 \quad y \quad y^2$$

$$\Rightarrow \text{common factor: } y$$

8,   16   12
1×8   1×16   1×12
2×4   2×8   2×6
           4×4   3×4

1,2,④,8   1,2,④,8,16   1,2,3,④,6,12

2. (3pt) Factor the GCF for the following: $-7(3x + 2) + 5x(3x + 2)$

Sol

$$= (3x+2)(-7+5x)$$

$$= (3x+2)(5x-7)$$

$$\Rightarrow \text{The GcF} = (3x+2)$$

Please turn over.

3. (4pts) Factor by grouping: $4x^2 - 2x + 8x - 4$

$$2x(2x-1) + 4(2x-1)$$

$$= (2x-1)(2x+4)$$