Math 3200 Quiz Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Part I: Place the letter of the correct answer in the space provided.* (9 Marks)

1. What is the degree of the polynomial ? 1.\_\_\_\_

A) 2 B) 3 C) 4 D) 5

2. What is the remainder when the function is divided 2.\_\_\_\_ by ?

A) -47 B) 1 C) 7 D) 31

3. What is the y-intercept of the function ? 3.\_\_\_\_

A) -7 B) -1 C) 0 D) 7

4. What are the possible integral zeros of  ? 4.\_\_\_\_

1.  B)  C)  D) 

5. What is the end behaviour for the graph of ? 5.\_\_\_\_

A) Up in Quad 1 and down in Quad 3 B) Up in Quad 1 and up in Quad 2

C) Up in Quad 2 and down in Quad 4 D) Down in Quad 3 and down in Quad 4

6. Which is not a polynomial function? 6.\_\_\_\_

A) B)

C) D)

7. What is the value of , if is a factor of ? 7.\_\_\_\_

A) -20 B) -16 C) 16 D) 20

8. What is the leading coefficient of the function ? 8.\_\_\_\_

A) -2 B) -1 C) 3 D) 4

9. Which function has as a factor? 9.\_\_\_\_

A) B)

C) D)

Part II: Show all workings in the space provided to receive full marks. (16 Marks)

1. Divide by using long division. Write your answer as and identify any restrictions on the variable. (4 Marks)

2. Factor fully. (5 Marks)

3. Mary claims that all graphs of polynomial functions of the form  where *a, n,*   
 and *b* are odd integers, extend from Quadrant II to Quadrant IV. Do you agree? Use   
 examples to explain your answer. (3 marks)

4. For what value of will the polynomial have the same remainder when it is divided by and ? (4 Marks)