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| Test 1Dusty Wilson Math 098No work = no creditNo Symbolic Calculators | **Name:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*There'll be plenty of time to rest in the grave.*Paul Erdös (1913 - 1996) Hungarian mathematician |

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| Warm-ups (1 pt each): | =\_\_\_\_\_ | =\_\_\_\_\_ | =\_\_\_\_\_ |

(1 pt) According to Erdös (see above), where should we catch up on sleep?

(4 pts) Does the following graph represents a function?



Solution: \_\_\_\_\_\_\_\_\_\_\_

(6 pts) Find the following function values of 

1.  = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3.  = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(10 pts) Using the given graph, answer the following:

|  |  |
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| 1. Evaluate = \_\_\_\_\_\_\_\_\_\_\_
2. Solve
3. Estimate the zero(s) of *f*?
4. Write the domain of *f* in interval notation.
5. Write the range of *f* in interval notation
 |  |

(4 pts) Use your calculator to generate a graph of  and then find the zero(s) of this polynomial to the nearest thousandth. Carefully copy the graph into the box.

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| zero(s) | graph |

(6 pts) Consider 

1. Write in descending order
2. What is the degree of the given polynomial: \_\_\_\_\_\_\_\_\_\_\_
3. What is the leading coefficient of the given polynomial: \_\_\_\_\_\_\_\_\_\_\_

(8 pts) Add/subtract and simplify

1. 

Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. 

Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(12 pts) Multiply and simplify

|  |  |
| --- | --- |
| 1.
2.
3.
 | Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

(24 pts) Factor completely

|  |  |
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| a.)  Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | b.)  Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| c.)  Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | d.)  Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| e.)  Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | f.)  Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

(12 pts) Solve

1. 

Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. 

Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. 

Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_