**C1 Sketching Polynomials Assignment Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Complete each of the following and then get a classmate to check your solutions.

Answers may vary.

Name of Classmate: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| 1. Draw the sketch of a continuous function that has no x-intercepts, one turning point and a *y*-intercept of -3.

State the following for your graph:1. Absolute Maximum: \_\_\_\_\_\_\_\_\_\_\_\_\_
2. Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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| 1. Draw the sketch of a continuous function that starts in quadrant III and ends in quadrant I, has no turning points, a Domain of [-4, 6] and a Range of [-3,2].

State the following for your graph:1. The x-intercept is: \_\_\_\_\_\_\_\_\_\_.
2. The y-intercept is: \_\_\_\_\_\_\_\_\_\_.
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| 1. Draw the sketch of a continuous function that has a curve with two x-intercepts of -3 and 9, one turning point, a Domain of and a Range of .

State the following for your graph:The coordinates of the turning point are: \_\_\_\_\_\_\_\_\_\_. *(Only one correct answer)* |  |
| 1. Draw the sketch of a continuous function that has a curve starting in quadrant II and ending in quadrant IV with two turning points, a y-intercept of 4, two x-intercepts and a Domain of .

State the following for your graph:1. y = \_\_\_\_\_ when x = 2
2. x = \_\_\_\_\_ when y = -3
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| 1. Draw the sketch of a continuous function that has a curve starting in quadrant III and ending in quadrant I with three x-intercepts, a local maximum of 4, an absolute minimum of -8, y = 2 when x = 1, and a Domain of .

State the following for your graph:1. The Range is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
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