

NAME: _____ Score _____/10

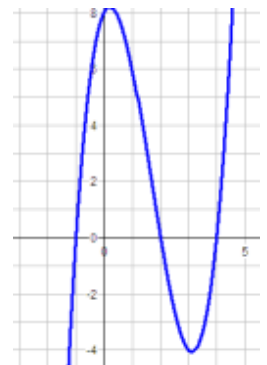
Please **print** your name**SHOW ALL YOUR WORK IN A NEAT AND ORGANIZED FASHION**

1. T F In a Cartesian coordinate system, the point of intersection of the two number lines is called the beginning point.
2. T F The graph of an inequality in two variables is a region of the Cartesian coordinate system.
3. What is the length of the line segment joining (1, 3) and (-1, 7)?
Show your work. State the formula you intend to use and then use it. No decimal approximations! Lengths may be irrational numbers!
4. To find the x-intercepts of a graph we let _____ and solve for_____.
5. Write the equation of a circle with radius 5 and center at the point (2, -3).
State the formula you intend to use and then use it.
6. If (2, j) is on the graph of $y = x^3 - x^2 + 2x + 3$, what is the value of j ?
Show your work and explain (with words) your work.

7. If $(m, 32)$ is on the graph of $y = x^5$, what is the value of m ?
Show your work and explain (with words) your work.

8. What is the relation between the equations $y = 3x^2 - 2$ and $y + 6 = 3x^2 + 4$? **Your response should be a complete English sentence.**

9. Refer to the graph of an equation in two variables at the right. Is the ordered pair $(3, 4)$ a solution for the equation? This computer generated graph is pretty accurate. **Explain (with words) why or why not.**



10. What is the relation between the graph of $y = 3x^2 + 2$ and the graphs of $y < 3x^2 + 2$ and $y > 3x^2 + 2$? **Your response should be a complete English sentence.**