

Name _____

[06-09-20-T11-F]

$$f(x) = ax^2 + b$$

- **A. Discuss the function f defined by $f(x) = x^2 - 5$. Give complete answers using correct notation.**
 - **1. Domain**

 - **2. Range**

 - **3. Zeros**

 - **4. Asymptotes: There are none**

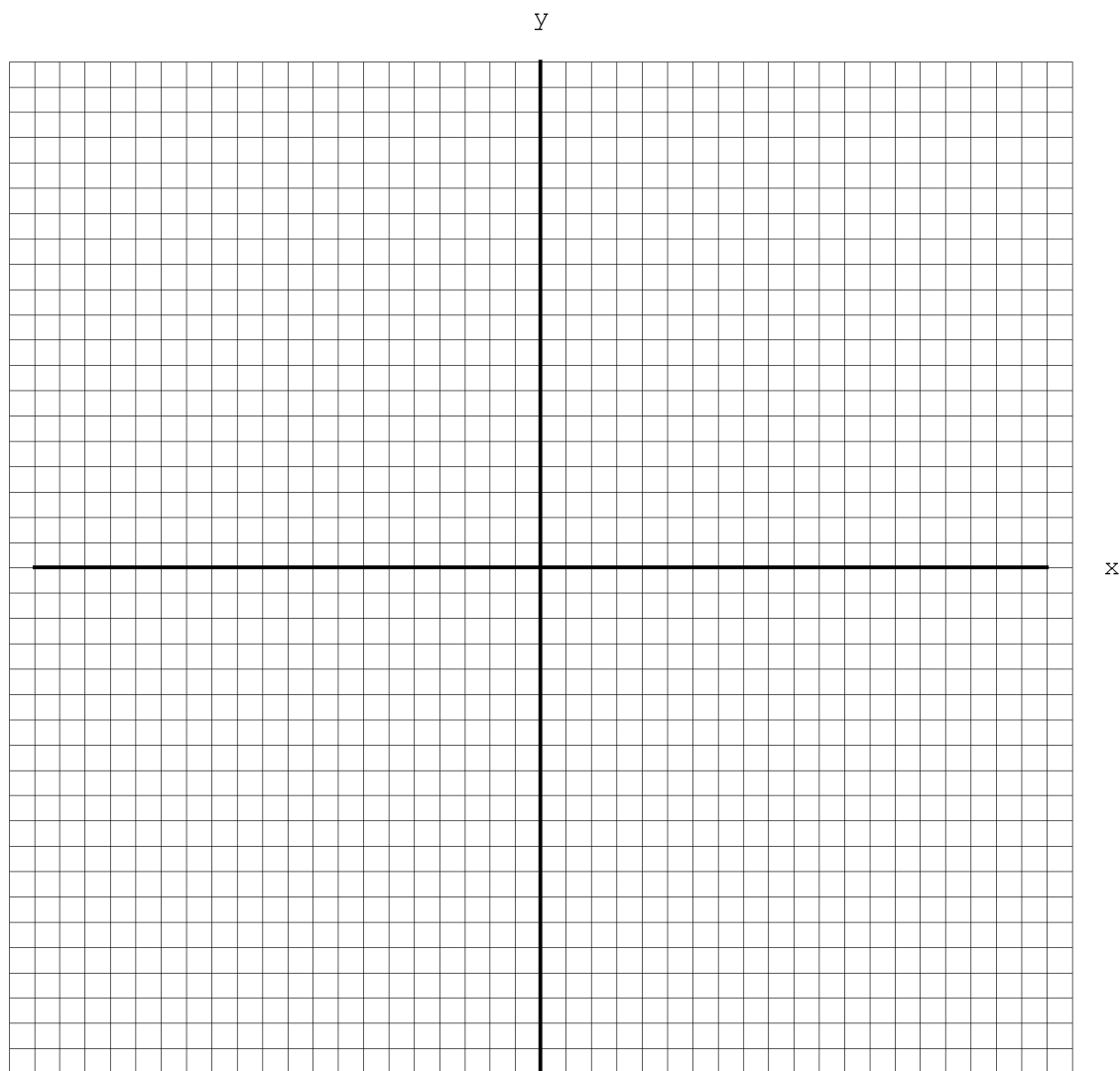
 - **5. Extreme values (maximum, minimum).**

 - **6. Monotonicity (increasing, decreasing)**

 - **7. Symmetry (state the line of symmetry, if it exists)**

 - **8. Rate of change (constant or variable? Support your answer)**

■ Graph the function



■ **B. Discuss the function f defined by $f(x) = -\frac{1}{2}x^2 + 5$. Give complete answers using correct notation.**

■ **1. Domain**

■ **2. Range**

■ **3. Zeros**

■ **4. Asymptotes: There are none**

■ **5. Extreme values (maximum, minimum)**

■ **6. Monotonicity (increasing, decreasing)**

■ **7. Symmetry (state the line of symmetry, if it exists)**

■ **8. Rate of change (constant or variable? Support your answer)**

■ Graph the function

