

Pre-Calculus
Quadratic Review

Name _____

Find the equation and the range of the quadratic function that has the given properties

1) $a = 2$, vertex is $(5, -4)$

2) y -intercept of 4 and x -intercepts of $-\frac{4}{3}$ and -1

3) passes through the points $(0, 4)$ and $(\pm 2, 0)$

- 4) Sadie and Sophia, bitter because they don't get enough of their questions answered in class, design a see-saw which they place on top of a 20 foot ledge in the hope that they can persuade Mr Murphy to sit on top of it. Once there, they drop a large anvil on the other side propelling Mr. Murphy up into the air with an initial velocity of 59 ft/second. When does Mr Murphy hit the ground?
- 5) Foolishly, Mr. Murphy walks across the same see-saw again thinking that Jaqueline and Kyna would never do the same thing only this time the falling anvil propels him upward to a maximum height of 420 feet which he reaches in 5 seconds. What was his initial velocity?