

Name _____ Date _____
MAT 1275CO – Mr. Kan Vertex Form

Go to <https://openlab.citytech.cuny.edu/kanmat1275cosp2020/take-home-quizzes/> for clickable links to the videos.

- 1) Watch this video: <https://www.youtube.com/watch?v=A2eK7VziEn0>
- 2) Watch this video: <https://www.youtube.com/watch?v=pf9LkX8hpTQ>
- 3) The vertex is also called the *turning point* of a parabola.
 - a) If $a > 0$, the vertex is the _____.
 - b) If $a < 0$, the vertex is the _____.
- 4) Find the vertex of $y = (x - h)^2 + k$
- 5) Find the vertex of $y = (x + h)^2 + k$
- 6) Find the vertex of $y = (x + 5)^2 - 9$
- 7) a) Fill in the blanks to complete the square: $y = (x^2 - 8x + \underline{\hspace{2cm}}) - 10 + \underline{\hspace{2cm}}$
 - b) Factor the parentheses: $y = (\underline{\hspace{2cm}})^2 + \underline{\hspace{2cm}}$
 - c) Identify the vertex of the parabola: $(\underline{\hspace{2cm}}, \underline{\hspace{2cm}})$