Use your knowledge of transformations to write the function equations on $[-5, 5]$ by $[-3, 5]$. List the restricted domains.

For graph $y_8$, use a reasonable estimate to determine the location of the vertex.

Graph $y_9$ will NOT require any estimation in order to determine the location of the vertex. This graph is slightly more challenging than what you’d see on a test.

![Graph Image]

$y_1 = \quad \text{domain:}$

$y_2 = \quad \text{domain:}$

$y_3 = \quad \text{domain:}$

$y_4 = \quad \text{domain:}$

$y_5 = \quad \text{domain:}$

$y_6 = \quad \text{domain:}$

$y_7 = \quad \text{domain:}$

$y_8 = \quad \text{domain:}$

$y_9 = \quad \text{domain:}$
\[ y_1 = \frac{1}{4}|x| + 2, \text{ Domain } [-4, 4]\]
\[ y_2 = -2|x|, \text{ Domain } [-1, 1]\]
\[ y_3 = -\frac{1}{2}x^2 - \frac{3}{2}, \text{ Domain } [-1, 1]\]
\[ y_4 = -(x - 1)^2 + 1, \text{ Domain } [0, 2]\]
\[ y_5 = -(x + 1)^2 + 1, \text{ Domain } [-2, 0]\]
\[ y_6 = \frac{3}{4}(x - 2)^2, \text{ Domain } [2, 4]\]
\[ y_7 = \frac{3}{4}(x + 2)^2, \text{ Domain } [-4, -2]\]
\[ y_8 = -\frac{3}{8}x^2 + 4, \text{ Domain } [-2, 2]\]
\[ y_9 = \frac{2}{3}x^2 - \frac{8}{3}, \text{ Domain } [-2, 2]\]