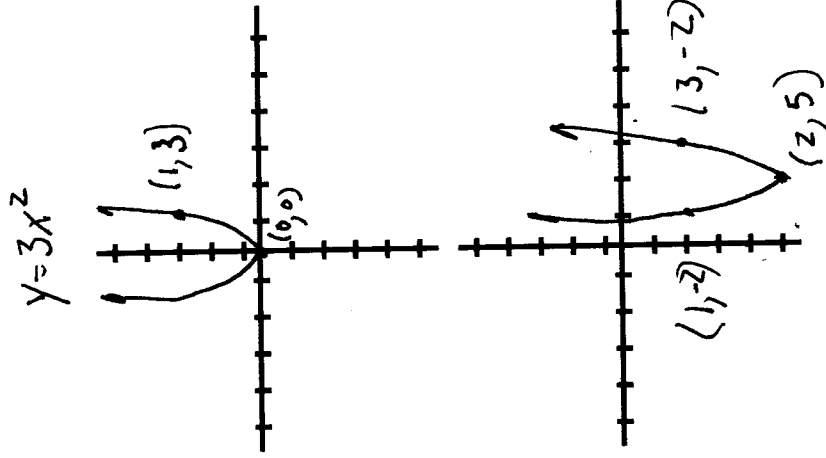
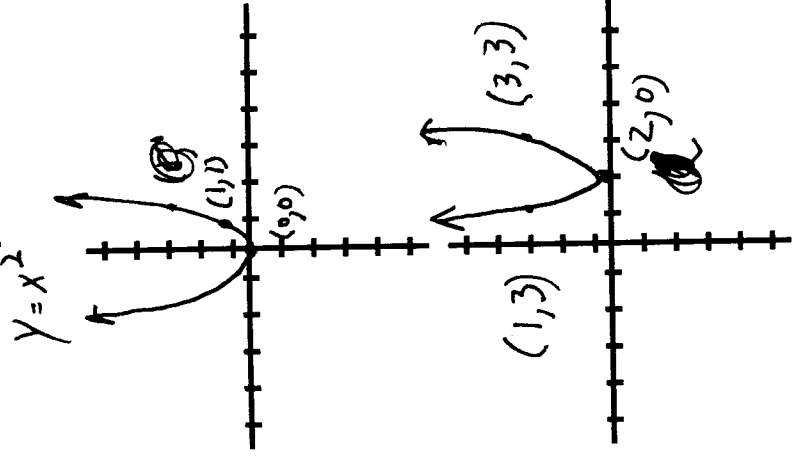


Problem 5 (10 points). Graph $f(x) = 3x^2 - 12x + 7$ using transformations.
 Label at least one point on each graph.



$$\begin{aligned}
 y &= 3(x-h)^2 \\
 &= 3(x^2 - 2xh + h^2) \\
 &= 3x^2 - 6hx + 3h^2
 \end{aligned}$$

$$-6h = -12$$

$$h = 2$$

So

$$\begin{aligned}
 y &= 3(x-2)^2 \\
 &= 3(x^2 - 4x + 4) \\
 &= 3x^2 - 12x + 12
 \end{aligned}$$