Log-log plots problems (not HW, but highly recommended).

For each of the data sets below, graph these points on either semi-log or log-log paper and determine the function which best models these data points from the choices below.

1.) $(1, 10)$, $(8, 40)$, $(32, 100)$, $(8000, 4000)$ ANS: $y = 10t^{\frac{2}{3}}$

2.) $(1, 10000)$, $(5, 400)$, $(15, 50)$, $(73, 2)$ ANS: $y = 10000t^{-2}$

3.) $(1, 1)$, $(60, 4)$, $(200, 6)$, $(3200, 15)$, $(8000, 20)$ ANS: $y = t^{\frac{1}{3}}$

4.) $(1, 1000)$, $(5, 200)$, $(20, 50)$, $(515, 2)$ ANS: $y = 1000t^{-1}$

5.) $(1, 100)$, $(35, 600)$, $(400, 2000)$, $(8100, 9000)$ ANS: $y = 100t^{\frac{1}{2}}$