## **Solution**

- 1.  $n(\log n)^3$
- 2.  $2^{\sqrt{logn}}$
- 3.  $n^{4/3}$
- 4.  $2^{(logn)^2}$
- 5.  $2^n$
- 6.  $2^{2^n}$
- 7.  $2^{n^2}$

I think that it makes sense for number 7 to be the highest growth rate, because  $n^2$  is a fast growth rate, and so squaring that would mean that it was even faster.  $2^n$  is a slightly slower growth rate than  $n^2$ , so for that reason I placed it in 6th place. I chose  $n(logn)^3$  as the slowest growth rate because it was the closest to a linear growth rate.