Binomial PMF

I had the program run 40 trials. For the values of $P$ I used

$.5$ - The result was a graph that stayed at $y = 0$ until $x = 10$, then it increased to $y \sim .13$ by $x = 20$, and then symmetrically decreased again.

$.25$ - The binomial increases at $x = 0$ and caps out at $x = 10$. It reaches $0$ at $x = 20$.

$.75$ - The binomial increases at $x = 20$ and caps out at $x = 30$. It reaches $0$ at $x = 40$.

Binomial CDF

I had the program run 40 trials.

The plot increases at a point on the graph and then levels out at the top, but never goes back to $0$.

Where the increase in $y$ occurs varies depending on the number of $p$. The lower the $p$ value is the closer to $x = 0$ the graph will increase from $y = 0$.

For example, at $p = .5$ the graph increases at $x = 10$ and maxes at $y = 1$ when $x = 30$. For $p = .25$ the graph increases at $x = 0$ and maxes at $y = 1$ when $x = 20$.

Geometric PMF

I ran 10 trials for this.

For plot showed a trend in the $y$-value decreasing from $y = p$ starting at $x = 1$. As the values of $x$ increased the curve started to flatten out. The curve appeared to have a limit of $x = 0$.

Geometric CDF

Almost the opposite happened with the CDF than the PMF. The plots started at $x = 1$ and increased in $y$ value as $x$ increased. The $y$-values started at $y = p$. The plot created a stair effect, with $y$ remaining constant from $[x1, x2)$, then jumped to a higher $y$-value. The limit appeared to be $y = 1$. 