12. [9 points] Three intervals are given below. In the space next to each interval, write the letter(s) corresponding to each power series (A)-(I) (below) whose interval of convergence is **exactly** that interval. There may be more than one answer for each interval. If there are intervals below for which none of the power series (A)-(I) converge on that interval, write "NONE" in the space next to the interval. You do **not** need to show your work.

a. [3 points] $(-2, 2)$: B

b. [3 points] $(0, 10]$: C

c. [3 points] $[0, \infty)$: NONE

(A) $\displaystyle\sum_{n=0}^{\infty} \frac{x^{4n+2}}{n!}$ (B) $\displaystyle\sum_{n=0}^{\infty} \frac{(-1)^n n(2x)^n}{4^n}$ (C) $\displaystyle\sum_{n=1}^{\infty} \frac{(-1)^n (x-5)^n}{n5^n}$

(D) $\displaystyle\sum_{n=1}^{\infty} \frac{(x-5)^n}{\sqrt{n}}$ (E) $\displaystyle\sum_{n=0}^{\infty} \frac{x^n}{n!}$ (F) $\displaystyle\sum_{n=1}^{\infty} \frac{x^n}{n2^n}$

(G) $\displaystyle\sum_{n=1}^{\infty} \frac{(\frac{1}{2}x)^n}{n^2}$ (H) $\displaystyle\sum_{n=0}^{\infty} \frac{(x-5)^n}{5^n}$ (I) $\displaystyle\sum_{n=0}^{\infty} \frac{x^{2n}}{2^n}$