

3b

$$P_3(x) \approx 0.8455x^3 - 1.06x^2 + 1.9331x + 2.7183$$

MY P_n FOR LAGRANGE FORM & NEWTON AREN'T
EQUAL SO AT LEAST ONE IS INCORRECT.

3c

ASSUMING MY NEWTON'S FORM $P_3(x)$ IS CORRECT...

$$P_3(1.5) = 6.0865$$

$$e^{1.5} \approx 4.482$$

VS.

$$P_3(4) = 47.603$$

$$e^4 \approx 54.598$$

$P_3(1.5)$ IS THE MORE ACCURATE

APPROXIMATION IN TERMS OF
ABSOLUTE ERROR, BUT $P_3(4)$ IS
MORE ACCURATE IN TERMS OF
RELATIVE ERROR.