Problem discussed in the videos:

Videos (4) – (6)
[Parts (a)-(c) not covered in the videos]
d) A buffer solution is made by mixing HNO_2 and $NaNO_2$. What is the pH of a 1.00 L buffer solution that is 0.100 M HNO_2 and 0.150 M $NaNO_2$?
($K_a = 4.3 \times 10^{-4}$)
e) Consider adding a strong base to a buffer. Write the chemical reaction that occurs when the strong base NaOH reacts with the buffer solution from part 4d.
f) If you add 20.00 mL of 1.00 M NaOH to the solution, estimate the resulting pH. (circle one):

1 2 3 4 5 6 7 8 9