**Honors – VSEPR Quiz Makeup**

For questions 1-3, draw the Lewis structure of the indicated compound, and then determine the shape and bond angle of the molecule. Show resonance structures for compounds in which they exist. (Lewis structure, 5 pt, shape 2 pt, angle 2 pt):

1. BeBr2 shape: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

bond angle: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. SiO2 shape: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

bond angle: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. CHO3-1 shape: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

bond angle: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. In class, we learned that when you have four things coming off of the central atom in a compound, the bond angle should be 109.5o. However, the actual bond angles in ammonia are 107.5o. Why is the bond angle of ammonia different than what we may have expected? (4 pt)
2. Which has a higher bond angle, BH3 or PF3? Explain your answer. (4 pt)
3. If you look up the bond angle for NaCl online among reputable sources, you’ll find that some people say there’s a 90o angle, some say that there’s a 180o angle, and that still others claim that there’s no bond angle at all. Which of these do you think is right? Explain your answer.

Seriously, make sure you *really* explain your answer, because I’ll give you points based on whether your answer makes sense in terms of what we’ve learned about VSEPR. (4 pt)