

Your Ch 8-9 FRQ test will comprise 2 to 4 of the actual FRQs below.

Strategies:

- Review "How to Answer FRQs" on our website, write legibly, box answers, show calcs, fig figs, units, use contrasting colors IN PEN, bullet or outline form, charts for electronic & molecular FRQs.

QUESTION 1: Short – 7 minutes suggested time, 4 points.

Sulfur can be found in many different forms in nature. Three formulas that illustrate this are S_8 , SO_2 , and Na_2S .

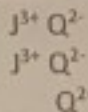
- Draw diagrams that demonstrate the bonding found within/of each of these species, showing resonance structures where appropriate.
- Briefly describe the type of bonding present in each species.

Hints: (a): S_8 is a ring structure. For covalent type bonding, be sure to show all electrons (bonding pairs as lines, lone pairs as dots). For ionic bonding show both "space-filling" structures in the correct ratio and also show a group of ions in their correct ratios. Here are examples of both:

space filling structure:

Show relative sizes,
also label the ions

group of ions, for example, in a 2:3 ratio:



(b) Possible choices include ionic, polar covalent, nonpolar covalent, network covalent, metallic.