Practice Problems: Mole Calculations

See the complete solutions to these problems at http://www.youtube.com/watch?v=w2-Pcfj60fA.

Perform the following calculations, being sure to give the answer with the correct number of significant digits.

1. How many atoms are in 8.21 g Li?

2. What is the mass in grams of 4.17×10^{21} formula units of magnesium perchlorate?

3. How many sulfur atoms are in 72 g of cobalt(III) sulfate?

4. How many grams of lithium are in 30.6 g of lithium nitride?

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5. A sample of cadmium borate contains 72.9 g of boron. What mass of cadmium will the sample contain?

6. What is the mass of sulfur in grams in a sample of manganese(VI) sulfate containing 8.291×10^{24} oxygen atoms?