Reading Guide 5

1) Before reading the chapter use the division algorithm for a specific example: What is 4x^3+ 2x^2-17x+9 divided by x-1?

2) Now read up to corollary 3. The book explains in detail why the division algorithm works. Summarize in your own words what needed to be shown and the main ideas of the proof of proposition 2.

3) Why is $\deg(q - q') + \deg(g) \geq \deg(g)$ in the proof of proposition 2?

4) Make sense of the proof of corollary 3 and use it to prove exercise 5.1.

5) In corollary 4, what does it mean for f to be *unique*? Show that <x> and <4x> both generate the same ideal. Is this is a contradiction to corollary 4?

6) Read until right before definition 5. What is a *PID*? Why might a PID be a useful object?

After GCD: TODO

7) Do exercise 5.4.