

**Ideas in Mathematics**  
**Math 170, Spring 2018**  
**Questions about Midterm 1**

**1. What is the policy on cheat-sheets etc.?**

Answer: No cheat-sheets are allowed, also no calculators or other devices. The class is about ideas in math, there should be very little you need to memorize (but quite a bit you need to understand).

**2. Is the material from the last chapter on Number Theory on the midterm?**

Answer: From the last chapter, the material on primes and divisibility is relevant for the midterm, although you do not need to memorize the different types of primes (Mersenne, Fermat, etc.). You also need to know and understand the statement of the fundamental theorem of arithmetic and the statement of Euclid's Lemma. No proofs from this chapter are relevant for this midterm.

**3. With respect to the proof about the square root of a prime being irrational, are we allowed to cite the "box" from class as we did in the homework?**

Answer: For the proof about the square root of a prime being irrational, you can cite the "box" if you'd prefer. But that box is actually a special case of Euclid's Lemma, which is why in class I have gone over to citing that now.

**4. I noticed that in our review session, the practice midterm, and the notes on canvas, there was nothing about converting from base 10 into other bases though it did come up in lecture and on the homework. Is this something that might still be tested?**

Answer: In the review session yesterday I converted "120" in base 3 to base 10. Also, on the practice midterm, there is a problem about base 2 (although not conversion to base 10). So yes, you need to understand well how place-value systems work and how to convert numbers.

**5. Is there an answer key for the practice midterm online?**

Answer: Since I am giving extra credit for handing in the practice exam I can't post the answers. After the midterm we can discuss with the class whether it would be more helpful to have answers posted for the next practice midterm, and not have the option to hand it in.