Commonly encountered challenges in research ethics

The scenarios below are attempts at getting at some situations you may encounter at some point, and that could be difficult to respond to. The point is to realize that research ethics isn't only about egregious violations (like faking your data) but is in fact about the subtler things that you'll confront all the time. Remember that your reputation as an honest person is more important, even in terms of your professional standing, than how many papers you publish and where you publish them.

Scenarios.

1. Your and your co-authors are writing a paper about a method you have developed, and you are comparing your method A to the best alternative method, B. Your method A is doing better than method B on the datasets you are studying, and so you are preparing the manuscript with this comparison for a prestigious conference. Two weeks before the deadline, you realize the details about how method B was run are not in the paper. Your co-author did the analysis, so you ask your co-author for the details (version number and commands used). Unfortunately, the version he used is an old one, and the method B has been largely overhauled since then. What do you do? Start over and redo all the analyses? Include the data you have and not report the version number? Include the data and report the version number, but not include a discussion in the paper about how this is an old version so perhaps results would be different with the updated version? What if you can't complete the analyses before the deadline?

2. Same question as the previous, but now assume you didn't find out about the version being an old one before the paper was submitted. What do you do? Do you retract the paper? Do you let the program chair know about the problem before the decision is made? What do you do if you find out about the version being outdated after the paper is accepted?

3. Same question as the previous, but suppose you're the person who used the wrong version. Do you tell your co-authors? How do you tell them?

4. You are writing a paper introducing a new method A, and you plan to submit it to a major conference. Your co-author has the responsibility for performing the study on real world datasets, and on the datasets he picked your method is better than the competing methods, nearly all the time. Close to the deadline to submitting the paper, you find another benchmark collection of real world datasets for your problem, and on these your method is clearly worse than the best competing method. Suppose your co-author doesn't want to include the results you obtained, because then the paper might not get accepted to the conference. What do you do?

5. You're a theoretician and you've proven a beautiful theorem and submitted it to a major conference. You discover after the paper is submitted that there's a gap in a proof, but you aren't sure if the theorem is or isn't true. What do you do? What if the paper is accepted before you find the gap? What if the paper is in press?

6. You review a paper for a conference and you discover something you can improve. What do you do? If the paper is accepted, but not yet published, is it okay to start working on it? What are your obligations?

7. Your co-author introduces a problem to you and you work on it. As you are writing it up, you find out that the problem and ideas came from a paper that is unpublished and your co-author reviewed. What do you do?

8. You strongly dislike someone and are asked to review a paper by them for a program committee. What do you do? What if you really like the author instead of dislike them?

9. You are on a program committee and you read a review of a paper that is scathing and that results in the paper being rejected. In your opinion, you think the review is also unfair. The person who wrote the paper is your friend. Do you warn your friend about the reviewer?

10. You're on a program committee and you see a scathing review by someone that you know has a personal or professional feud with the primary author on that paper. Do you tell the PC chair? (Ditto for extremely positive review, where the reviewer is a close friend of the primary author on the paper.)

11. People who serve on proposal review panels at NIH or NSF are obliged to keep the proposal confidential, and also to not reveal anything about the reviews outside of the panel (except with the government officials handling the panel). Suppose someone senior to you asks you to read a proposal he is reviewing for NIH or NSF. What do you do? Or, what if you are serving on a panel, and someone senior to you asks you what was said about his proposal. What do you do?

12. You are writing a paper or proposal. Do you cite all the relevant papers, or do you omit to cite papers by people you dislike?

13. Something published in arXiv is not yet peer reviewed. Suppose you come up with the same result. Can you submit it and not cite the article in arXiv?