More For You: Detox

Problem:
Here’s a more complex word problem: MDMA is an illegal psychoactive substance with an average half-life of 8 hours in the body. Drug tests can detect it in blood concentrations as low as 500 ng/mL.

If you have the average amount of blood in your body, 5.9 L, and you take an average dose of 120 mg, how long will it take until you can pass a drug test?

Solution: 42.6 hours, a bit under two days.

First Remark: Users report a plateau high of about 3-5 hours. For this high, you remain contaminated for two days.

Second Remark: Notice all the ‘average’ words above: drug effects are not exact; everyone is affected differently by a drug, and everyone will have different drug half-lives, effective dosages, etc. You can’t use computations like these to protect yourself from drug tests. Remember: for all drugs, your mileage may vary.

Third Remark: Users who take MDMA for a weekend party often report a ‘midweek’ depression, sometimes suicidal depression. Why? The drug is almost completely gone from the body; has been for two days. The reason is that MDMA affects the brain by preventing re-uptake of serotonin, a ‘feel-good’ molecule. The result is a long-term shortage of serotonin, leading to depression and other symptoms. The ‘hangover’ from MDMA can last a lot longer than you expect!

Fourth Remark: MDMA is an illegal substance; the people who sell it are criminals. These aren’t just insults; suppliers have the kind of personality that sees nothing wrong with screwing a customer. Often, street MDMA is cut with other drugs. Countries across the world are reporting deaths from MDMA cut with PMMA. As Wikipedia puts it, "Death can occur when an ecstasy user believes they are consuming recreational doses of MDMA, when they are in fact consuming a lethal dose of another substance with similar effects."

Hanging with criminals can come back and bite you.