Question 1. Could you do question 35? It's not obvious to me that F is conservative.

Answer. I think they mean, *assuming* $\vec{F}$ is continuous.

So it asks to find the path of least work. If we assume $\vec{F}$ is conservative, it is path independent, so every path is the same amount of work. □

Question 2. Does the differential form being exact always imply the field being conservative for a given function?

Answer. The form $M\,dx + N\,dy + P\,dz$ being exact is synonymous with $\vec{F} = \langle M, N, P \rangle$ being conservative, which is true if and only if $\vec{F} = \triangledown f$ for some scalar function f.

Keep in mind, however, that this is occurring *in a domain D*. So the form is exact in D if and only if $\vec{F}$ is conservative in D. □

Question 3. Why didn't you make bat a choice? That's the real reason for the coronavirus.

Answer. Bats and guns don't kill people. Viruses and bullets kill people. □