

March 17

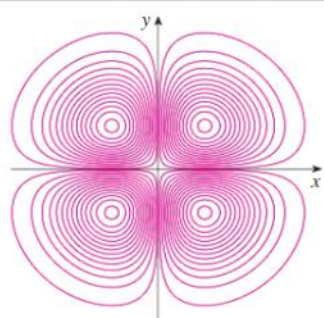
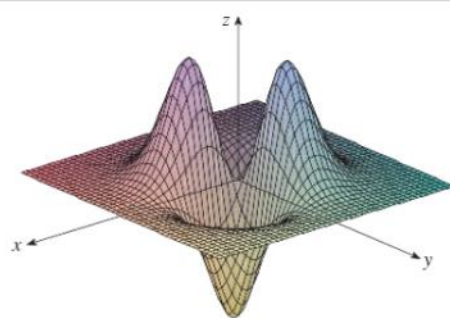
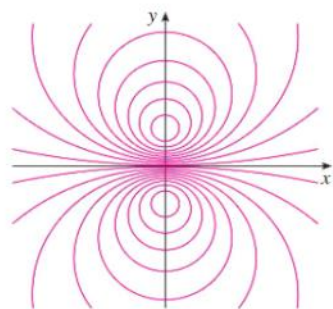
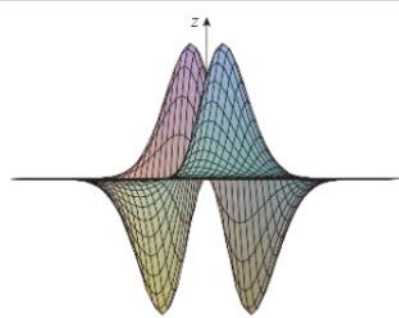
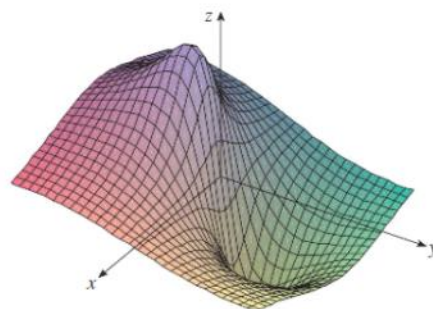
March 8, 2020 11:39 AM

§14.1 cont'd. (You can ask questions on Thursday at 11:30-12:30 using WebEx about Lecture 28 parts 1 & 2. Look for an e:mail from me).

Def'n Level Curve of a function $f(x,y)$ with Domain $D \subseteq \mathbb{R}^2$ are curves $\{(x,y) \in D : f(x,y) = c\}$ c are constants

Level sets

Image from our text book by Jim Stewart

(a) Level curves of $f(x, y) = -xye^{-x^2-y^2}$ (b) Two views of $f(x, y) = -xye^{-x^2-y^2}$ (c) Level curves of $f(x, y) = \frac{-3y}{x^2 + y^2 + 1}$ (d) $f(x, y) = \frac{-3y}{x^2 + y^2 + 1}$

$$f: D \subseteq \mathbb{R}^3 \rightarrow \mathbb{R}.$$

Def'n. LEVEL SURFACE of a function $f(x, y, z)$ with Domain $D \subseteq \mathbb{R}^3$ is a set of the form

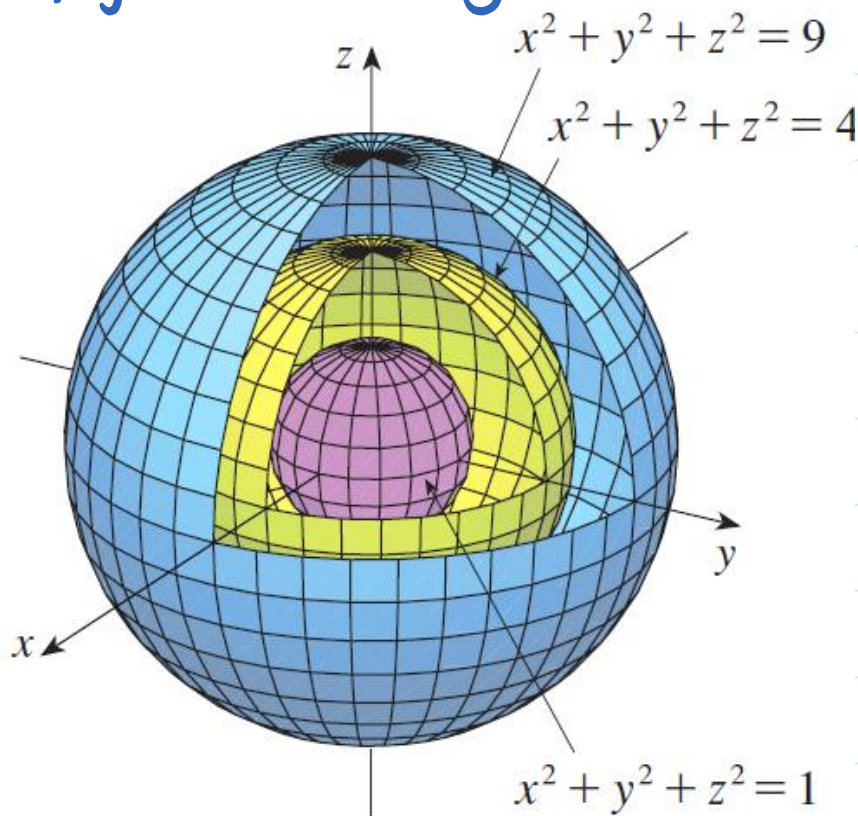
$$S_c = \{(x, y, z) \in D \mid f(x, y, z) = c\}$$

where c are constants.

Level Surface

Image from our textbook by Jim Steward

$$f(x, y, z) = x^2 + y^2 + z^2$$



Look for a ^{email} message
from me with the
link to my
WEBEX Meeting Room.

Online Discussions and Office Hours

Hi all,

as you probably already anticipated, I will move my discussion sections and office hours online, starting tomorrow. I'm sure your biggest concern right now is how we can continue to have class. Don't worry – I am prepared:

- The default method we'll use is Zoom – you'll have to download the client at <https://zoom.us>. I will post the data you need to join the meeting on bcourses.
- In case Zoom doesn't work for some reason (e.g. because the service is overloaded), we will use Google Meet. If that happens, I'll announce it beforehand. If you don't use an @berkeley.edu email address, I will have to invite you individually, so keep that in mind.
- If Google Meet also doesn't work anymore, I'll use a site called <https://explaineverything.com>, which is hosted AWS. You'll be able to see a whiteboard and talk to me directly in your web browser, but there's no video.
- In case that also ceases to work, we'll have audio-only discussion sections on my mumble server. I will send the details when it comes to that.
- In the case of bigger infrastructure disruptions (like a large scale power outage), we're going to have sections using amateur radio: I will use the Mt Diablo repeater station at 147.060 MHz with a PL tone of 100 Hz. My call sign is KN6CDY.
- In case the Bay area becomes uninhabitable, I will move to the wilderness. I plan to still be reachable via APRS, but we'll probably have to move sections to shortwave. In that case, we'll use CW transmission, so practice your Morse code.
Note that a nuclear attack in the upper atmosphere can create very strong electromagnetic fields, so if you want to prepare for that, either use vacuum tube based radios, or store them in a Faraday cage.

I hope this assures you that no matter what happens this semester, I will not let it prevent you from learning quantum mechanics.