

Math 2210-2, Review

1. Vectors, dot products, cross products, angles, equations of planes and lines (11.1 – 11.4).
2. Parametric equations of curves, arclength, speed, velocity, acceleration (11.5 – 11.6).
3. Surfaces in space, cylindrical and spherical coordinates (11.8 – 11.9).
4. Functions of 2 and 3 variables, level curves, level surfaces (12.1).
5. Partial derivatives (12.2).
6. Gradients, directional derivatives, chain rule (12.5 – 12.6).
7. Critical points, local and global maxima and minima, saddle points, second derivative test (12.8).
8. Double integrals, change order of integration (13.1 – 13.3).
9. Double integrals in polar coordinates (13.4).
10. Surface area (13.6).
11. Triple integrals (13.7).
12. Triple integrals in cylindrical and spherical coordinates (13.8).
13. Vector fields, divergence, curl (14.1).
14. Line integrals, independence of path, gradients (14.2 – 14.3).
15. Green's Theorem, Divergence Theorem in the plane (14.4).
16. Divergence Theorem in space (14.5 – 14.6).