Chapter 14 Multiple Integration

Chapter Summary 14.1 Evaluate an iterated integral. • Use an iterated integral to find the area of a plane region. • 14.2 Use a double integral to represent the volume of a solid region. ٠ Use properties of double integrals. • Evaluate a double integral as an iterated integral. • 14.3 Write and evaluate double integrals in polar coordinates. • 14.4 Find the mass of a planar lamina using a double integral. • Find the center of mass of a planar lamina using double integrals. • Find moments of inertia using double integrals. • 14.5 Use a double integral to find the area of a surface. • 14.6 Use a triple integral to find the volume of a solid region. • Find the center of mass and moments of inertia of a solid region. • 14.7 Write and evaluate a triple integral in cylindrical coordinates. • Write and evaluate a triple integral in spherical coordinates. • 14.8 Understand the concept of a Jacobian. • Use a Jacobian to change variables in a double integral. •