

Homework Set # 9 (updated)

1. (§5.3) Page 288: # 3(c)(d), 9.
2. (§5.4) Page 293: # 2, 4(d), 9.
3. (§5.5) Page 303: # 10, 18.
4. Let W be that part of the solid sphere $x^2 + y^2 + z^2 \leq 25$ which lies above the plane $z = 3$.
Set up but do not evaluate the triple integral

$$\iiint_W (2x^2 + 2y^2 + 7z) dV$$

in *Rectangular, Cylindrical and Spherical Coordinates*.

5. Fill in the boxes: $\int_{-3}^3 \int_0^{\sqrt{9-x^2}} \int_{\sqrt{x^2+y^2}}^3 (5x - 4z) dz dy dx = \int_{\boxed{}}^{\boxed{}} \int_{\boxed{}}^{\boxed{\phantom{\sqrt{9-x^2}}}} \int_{\boxed{\phantom{\sqrt{x^2+y^2}}}}^{\boxed{}} \boxed{} dy dx dz$.

6. (§6.1) Page 313: # 7.
 7. (§6.2) Page 326: # 3, 5(b), 19.
 8. (§6.3) Page 337: # 5.
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