

## 1 Memorize the Vector Differential

Write  $\vec{dr}$  in rectangular, cylindrical, and spherical coordinates.

(a) Rectangular:

$$\vec{dr} = \quad (1)$$

(b) Cylindrical:

$$\vec{dr} = \quad (2)$$

(c) Spherical:

$$\vec{dr} = \quad (3)$$