

5.11 To find the magnetic field  $B$  at  $P$  due to a current-carrying wire we use the Biot-Savart law,

$$\vec{B}(\vec{r}) = \frac{\mu_0}{4\pi} I \int \frac{d\vec{l} \times \hat{\mathcal{R}}}{\mathcal{R}^2}$$

In the figure, with “ $dl$ ” shown, what is  $\vec{\mathcal{R}}$  ?

