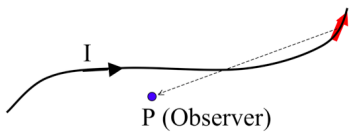
What do you expect for direction of $\mathbf{B}(P)$? How about direction of $d\mathbf{B}(P)$ generated JUST by the segment of current $d\mathbf{l}$ in red?



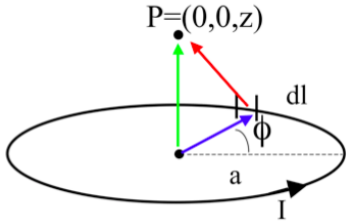
A. $\mathbf{B}(P)$ in plane of page, ditto for $d\mathbf{B}(P$, by red)
B. $\mathbf{B}(P)$ into page, $d\mathbf{B}(P$, by red) into page
C. $\mathbf{B}(P)$ into page, $d\mathbf{B}(P$, by red) out of page
D. $\mathbf{B}(P)$ complicated, ditto for $d\mathbf{B}(P$, by red)
E. Something else!!

ANNOUNCEMENTS

- Danny out of town this Wednesday; Dennis will lecture
- Homework 9 due this Friday
- Homework 10 due Dec. 2nd (after Thanksgiving holiday)
- No help session week of Thanksgiving
- But, we will have class on Wednesday

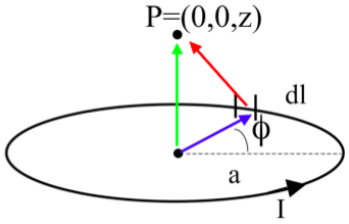
What is the magnitude of $\dfrac{d\mathbf{l}\times\hat{\mathfrak{R}}}{\mathfrak{R}^2}$?

A. $\dfrac{dl\sin\phi}{z^2}$
B. $\dfrac{dl}{z^2}$
C. $\dfrac{dl\sin\phi}{z^2+a^2}$
D. $\dfrac{dl}{z^2+a^2}$
E. something else!



What is $d\mathbf{B}_z$ (the contribution to the vertical component of $\mathbf{B}$ from this $d\mathbf{l}$ segment?)

A. $\dfrac{dl}{z^2+a^2}\dfrac{a}{\sqrt{z^2+a^2}}$
B. $\dfrac{dl}{z^2+a^2}$
C. $\dfrac{dl}{z^2+a^2}\dfrac{z}{\sqrt{z^2+a^2}}$
D. $\dfrac{dl\cos\phi}{\sqrt{z^2+a^2}}$
E. Something else!



I have two very long, parallel wires each carrying a current I_1 and I_2, respectively. In which direction is the force on the wire with the current I_2?

A. Up
B. Down
C. Right
D. Left
E. Into or out of the page