

92. (a) From Kepler's law of periods, we see that T is proportional to $r^{3/2}$.
(b) Eq. 14-42 shows that K is inversely proportional to r .
(c) and (d) From the previous part, knowing that K is proportional to v^2 , we find that v is proportional to $1/\sqrt{r}$. Thus, by Eq. 14-30, the angular momentum (which depends on the product rv) is proportional to $r/\sqrt{r} = \sqrt{r}$.