#3. Using the small-angle formula I gave you when we were discussing Chapter 14, you can obtain the answers as follows:

For the case of Sun-Jupiter as seen from Alpha Centauri, the distance between the Sun and Jupiter is 5.2 AU and the distance to Alpha Centauri is 1.3 pc, so:

\[
\alpha = 206,265 \times \frac{(5.2 \times 1.5 \times 10^8 \text{ km/AU})}{(1.3 \text{ pc} \times 3.2 \times 10^{13} \text{ km/pc})} = 3.9''
\]

For the case of Jupiter-Ganymede as seen from Earth, the distance between Jupiter and Ganymede is a million km and the closest distance Jupiter gets to Earth (giving rise to its maximum angular separation) is 4.2 AU, so:

\[
\alpha = 206,265 \times \frac{(10^6 \text{ km})}{(4.2 \text{ AU} \times 1.5 \times 10^8 \text{ km/AU})} = 327''
\]