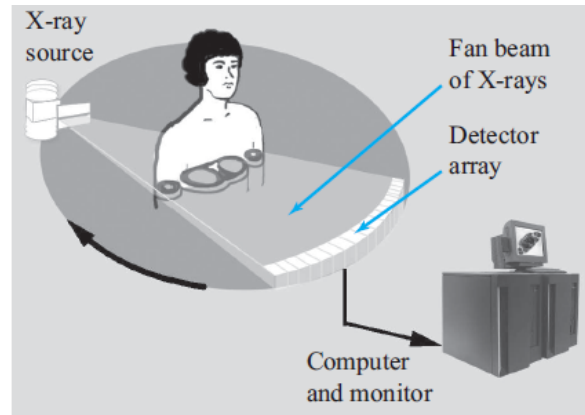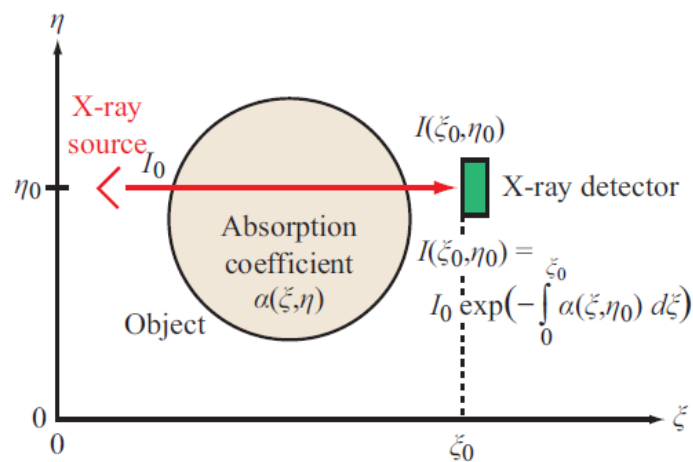**Concept Question 1-7:** What physical attribute of the imaged body is computed and displayed by a CT scanner?
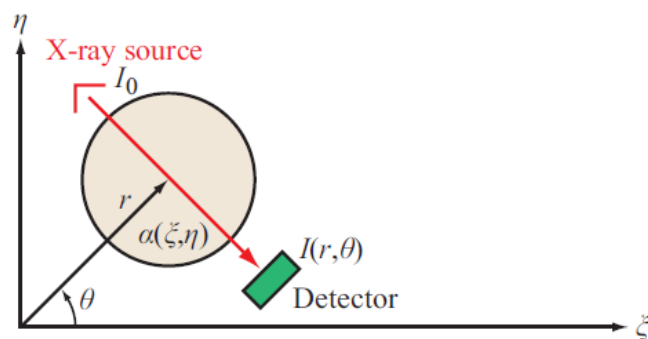
The absorption coefficient of each location within the slice being imaged.

(a) CAT scanner

(b) Horizontal path

$$I(\xi_0,\eta_0) = I_0 \exp\left(-\int_0^{\xi_0} \alpha(\xi,\eta_0)\, d\xi\right)$$

(c) Path at radius r and orientation θ

Figure 1-24 (a) CT scanner, (b) X-ray path along x, and (c) X-ray path along arbitrary direction.