Consider the following two expressions, where t is the regular time and t prime is the retarded time. When are they the same?

$$V = \frac{\mu_0 c}{4\pi r} \hat{r} \cdot \frac{d\vec{p}(t')}{dt}$$

$$V = \frac{\mu_0 c}{4\pi r} \hat{r} \cdot \frac{d\vec{p}(t')}{dt'}$$

A. Always

B. Never

C. Far from the source

D. Close to the source

Consider the following two expressions, where t is the regular time and t prime is the retarded time. When are they the same?

$$V = \frac{\mu_0 c}{4\pi r} \hat{r} \cdot \frac{d\vec{p}(t')}{dt} \qquad\qquad V = \frac{\mu_0 c}{4\pi r} \hat{r} \cdot \frac{d\vec{p}(t)}{dt}$$

A. Always

B. Never

C. Far from the source

D. Close to the source

450 nm blue light will scatter roughly X times as well as 700 nm red light, where X is…

A. About 1.6

B. About 0.41

C. About 0.27

D. About 0.17

E. About 5.9

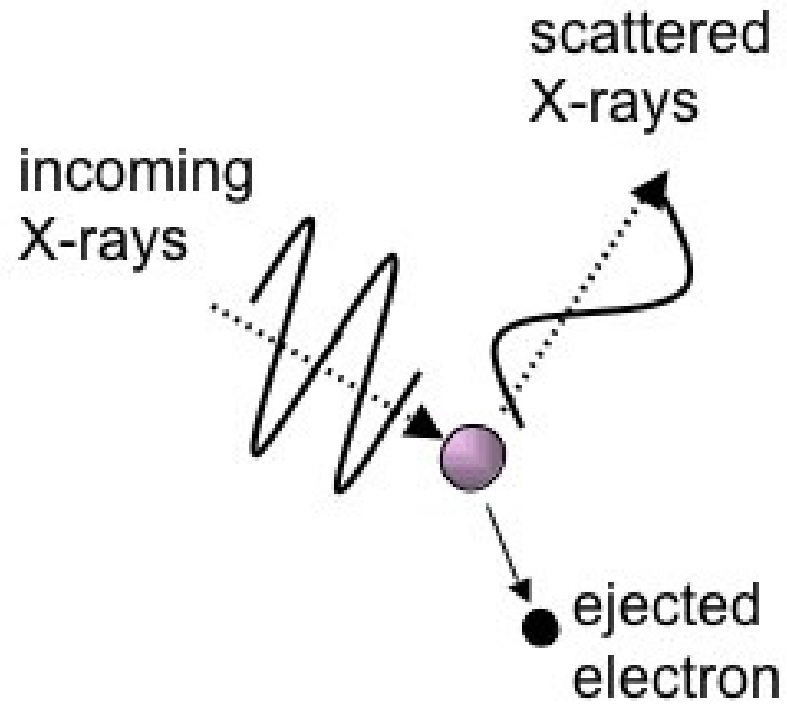The acceleration of a simple harmonic oscillator will be proportional to

A. ω

B. ω^2

C. ω^3

D. ω^4

E. It doesn't depend on frequency

Compton scattering

incoming X-rays

scattered X-rays

ejected electron

Exam 2 statistics

Average 34/50, High 46/50

High on problem 1 16/20, high on problem 2 30/30