

$$C = f \lambda$$

$$\frac{3 \times 10^8 \text{ m}}{\text{sec}} = \frac{1}{\text{sec}} * \lambda$$

$\lambda = 10^{-9} \text{ m}$

Blue 400nm
 $400 \times 10^{-9} \text{ m}$

RED 750nm
 $750 \times 10^{-9} \text{ m}$

μ micro 10^{-6}

V = velocity

Oct 27-7:47 AM

(6.15) a) $\lambda = 10 \text{ nm}$ $f = ?$
 $\lambda = 10 \times 10^{-6} \text{ m} = 1 \times 10^{-5}$

$C = f \lambda$
 $3 \times 10^8 = f (10 \times 10^{-6})$

$\frac{10 \times 10^{-6}}{1 \times 10^{-5}} \times \frac{3 \times 10^8}{10 \times 10^{-6}}$

$3 \times 10^{13} \text{ sec}^{-1}$

$\rightarrow 10000 \times 10^3 \text{ m}$
 10,000 nm
 Non VIS
 Radio Waves

Oct 27-8:08 AM

6.15 \pm

$C = f \lambda$

$3 \times 10^8 = 5.5 \times 10^{14} \lambda$

$5.42 \times 10^{-7} \text{ m}$

$542 \times 10^{-9} \text{ m}$

542 nm

2 decimals larger

2 decimals smaller

1×1000
 10×100
 100×100

blue-green
 U.V. / IR

Oct 27-8:12 AM

Q) SOUNDS

$3 \times 10^8 \text{ m}$	3×10^2	10^{-6} sec	SOUNDS =
sec		1 μsec	

3×10^2
 300×50
 15000 m

Oct 27-8:20 AM