35 cents
6/7

Let us compute $p^{tot} = \sqrt{p_1^2 + p_2^2}$

$$p^{tot} = \sqrt{(6.95)^2 + (7.97)^2} \times 10^{-21} \quad \text{or}$$

$$\boxed{p^{tot} = 10.57 \times 10^{-21} \ \frac{\text{kg meter}}{\text{sec}}}$$

A more common unit is to compute pc in MeV & then say p = so many MeV/c

Let us compute pc for 1 kg moving 1 meter/sec

$$pc = Mvc = M\frac{v}{c}c^2 = \frac{M}{m_e}\frac{v}{c}m_e c^2$$

$$\frac{M}{m_e} = \frac{1}{9.11 \times 10^{-31}}, \quad \frac{v}{c} = \frac{1}{3\times 10^8}, \quad m_e c^2 = .511 \text{ MeV}$$

$$\Rightarrow pc = \frac{1}{9.11\times 10^{-31}} \otimes \frac{1}{3\times 10^8} \otimes .511 = 1.87 \times 10^{21} \text{ in this case}$$

$$\therefore \quad p^{tot}c = 19.8 \text{ MeV} \quad \text{or} \quad \boxed{p^{tot} = \frac{19.8 \text{ MeV}}{c}}$$

Finally, we must find components:

We have $x = x_0 + R\cos(\omega t + \delta)$

$y = y_0 - R\sin(\omega t + \delta)$