Answer on Question 59231, Physics, Mechanics, Relativity

Question:

What is the dimension of power?

a) $ML^{-2}T^2$

b) ML^2T^{-2}

c) MLT^{-2}

d) ML^2T^{-3}

Solution:

By the definition of the power we have:

$$P = \frac{W}{t} = \frac{F \cdot s}{t} = m \cdot a \cdot \frac{s}{t} = [M] \cdot \left[\frac{L}{T^2}\right] \cdot \left[\frac{L}{T}\right] = [M] \cdot [L^2] \cdot [T^{-3}].$$

Thus, the correct answer is d) ML^2T^{-3}.

Answer:

d) ML^2T^{-3}