

**Answer on question #51850, Physics, Mechanics — Kinematics — Dynamics**

**Question** If s is distance and t is time, what must be the dimensions of a and b in the equation  $s = a \sin(bt)$

$$[a] = [L]^{-1}, [b] = [L]^{-1}$$

$$[a] = [T]^{-1}, [b] = [L]$$

$$[a] = [L], [b] = [T]^{-1}$$

$$[a] = [L]^2, [b] = [T]^{-2}$$

**Solution** Answer is  $[a] = [L], [b] = [T]^{-1}$ .

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