

Grade  FCAT Science Reference Sheet

Equations

Acceleration (\bar{a})	=	$\frac{\text{change in velocity (m/s)}}{\text{time taken for this change (s)}}$	\bar{a}	=	$\frac{v_f - v_i}{t_f - t_i}$
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Average speed (\bar{v})	=	$\frac{\text{distance}}{\text{time}}$	\bar{v}	=	$\frac{d}{t}$
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Density (D)	=	$\frac{\text{mass (g)}}{\text{Volume (cm}^3\text{)}}$	D	=	$\frac{m}{V}$
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Percent Efficiency (e)	=	$\frac{\text{Work out (J)}}{\text{Work in (J)}} \times 100$	%e	=	$\frac{W_{\text{out}}}{W_{\text{in}}} \times 100$
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Force in newtons (F)	=	mass (kg) \times acceleration (m/s ²)	F	=	ma
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Frequency in hertz (f)	=	$\frac{\text{number of events (waves)}}{\text{time (s)}}$	f	=	$\frac{\text{# of events}}{t}$
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Momentum (ρ)	=	mass (kg) \times velocity (m/s)	ρ	=	mv
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Wavelength (λ)	=	$\frac{\text{velocity (m/s)}}{\text{frequency (Hz)}}$	λ	=	$\frac{v}{f}$
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Work (W)	=	Force (N) \times distance (m)	W	=	Fd
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Units of Measure

cm = centimeter	Hz = hertz	kg = kilogram	N = newton
g = gram	J = joule (newton-meter)	m = meter	s = second