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CALCULUS JOURNAL APPLICATIONS OF INTEGRATION

1.	(a) The general solution of a differential equation contains		
	while a particular solution		
2.	The marginal revenue/cost function is of the original revenue/cost		
	function.		
3.	(a) Hyperbolic functions are related to the trig functions, through the use of		
4.	(a) The curve that results from letting a cable hang loosely between two poles is called		
	(b) This curve is used in engineering applications because		
5.	(a) Integration is used to calculate work when		
6.	The limits of integration when pumping a fluid out of a tank are determined by		
7.	(a) A fluid is		
	(b) Fluid force is		
	while fluid pressure is		
	(c) The units typically used to measure fluid force are		
	while the units used to measure fluid pressure are		
	(d) Pascal's Principle states that		
	(e) When finding the fluid force of a vertical object, you determine what numbers to integrate		
	between by		
8.	It is necessary to set up a proportion when calculating work or fluid force if		
	is changing.		
9.	List the following rules, facts, or formulas. <i>Explain the meaning of all variables in a formula!</i> a) Mathematical relationship between position, acceleration, and velocity		

b) Definitions of sinh *x* and cosh *x*.

c) Derivatives of 6 hyperbolic trig functions

d) Work done by a variable force & the two common units of measure for work

e) Hooke's Law

f) Work to pump fluid out of a tank

g) Fluid force on a vertical object