## Minimum or Maximum MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Determine whether there is a maximum or minimum value for the given function, and find that value.

	_		0	,				
	1) $f(x) = x^2 - 20x + 106$				1)			
	A) Minimum:6	B) Maximum: –6	C) Minimum: 0	D) Maximum: 10				
	2) $f(x) = x^2 + 16x + 62$				2)			
	A) Minimum: 0	B) Maximum: -2	C) Minimum -2	D) Maximum 2	<i></i>			
		D) maximum. $2$	C) Minimum 2	D) maximum $2$				
	2 $(1)$ $(2)$				2)			
	3) $f(x) = -x^2 - 18x - 89$	$\mathbf{D}$ $\mathbf{M}$ is in the $0$	C) Minimum 0	$\mathbf{D}$ ) $\mathbf{M}$	3)			
	A) Maximum: 8	B) Minimum: 8	C) Minimum: 0	D) Maximum: -8				
	A) (() A <sup>2</sup> A0 10(				4)			
	4) $f(x) = -4x^2 - 40x - 106$	D) Marineran (	C) Minimum 0	D) Mauimun (	4)			
	A) Minimum:6	B) Maximum: -6	C) Minimum: 0	D) Maximum: 6				
Solve	the problem							
50170	5) A rock is propelled upwa	rd from the top of a buil	ding 180 feet tall at an ir	nitial velocity of 56 feet	5)			
	per second. The function	that describes the heigh	t of the rocket in terms o	f time t is				
	$e(t) = -16t^2 \pm 56t \pm 180$ Do	$c(t) = -16t^2 + 56t + 180$ Determine the maximum beight that the rock reaches						
	$\Delta$ ) 212 ft	R) 191 ft	C 246 ft	D) 229 ft				
	<i>I</i> ( <i>)</i> 212 It	<i>D</i> ) 171 R	C) 240 It	D) $22$ ) It				
	6) A rock is propalled upwa	rd from the top of a buil	ding 90 foot tall at an ini	tial valocity of 120 fact	6)			
	per second. The function	that describes the beigh	t of the rocket in terms of	f time t is	0)			
	$(1) = 1(1^2 + 1201 + 00)$	that describes the neight						
	$s(t) = -16t^{2} + 120t + 90. De$	R) 200 th	C) 215 H	P) 220 4				
	A) 276 ft	<b>D)</b> 300 п	C) 515 ft	D) 550 ft				
	7) The owner of a video stor	a has determined that the	$a_{0} \operatorname{cost} C$ in dollars of $c$	porating the store is	7)			
	7 The owner of a video store has determined that the cost C, in donars, of operating the store is							
	approximately given by C	$L(x) = 2x^2 - 28x + 730$ , with $x = 2x^2 - 28x + 730$	here x is the number of v	ideos rented daily.				
	Find the lowest cost to th $(A) \neq 228$	e nearest dollar.		$D) \phi(22)$				
	A) \$338	D) \$828	C) \$534	D) \$632				
	8) The owner of a video stor	a has determined that the	$a \cot C$ in dollars of $c$	porating the store is	8)			
	of the owner of a video stol	The owner of a video store has determined that the cost C, in donars, of operating the store is $\frac{1}{2}$						
	approximately given by (	approximately given by $C(x) = 2x^2 - 22x + 710$ , where x is the number of videos rented daily.						
	Find the lowest cost to th	Find the lowest cost to the nearest dollar. $(2) \oplus \overline{2}$						
	A) \$389	D) \$408	C) \$771	D) \$650				
	0) The owner of a rides star	to has dotormined that it	a profite D of the store -	ro opprovimatal.	0)			
	(2) The owner of a video store has determined that the profits P of the store are approximately given $(2)$							
	$py P(x) = -x^2 + 20x + 51, w$	nere x is the number of	videos rented daily. Find	the maximum profit				
	to the nearest dollar.	D) #100						
	A) \$200	B) \$100	C) \$251	D) \$151				
	10) The manufactures of a CI	) playor has found that	the revenue P (in dellar		10)			
	$D() = 2 \mod 1$			, 1 · ·	10)			
	$R(p) = -5p^2 + 1800p$ , whe	n the unit price is p doll	ars. If the manufacturer	sets the price p to				
	maximize revenue, what	Is the maximum revenue	e to the nearest whole do $(2) \oplus 1$	h(40.000)				
	A) \$162,000	в) \$324,000	C) \$1,296,000	D) \$648,000				

## Answer Key Testname: MINIMUM OR MAXIMUM

1) A		
2) C		
3) D		
4) B		
5) D		
6) C		
7) D		
8) D		
9) D		
10) A		