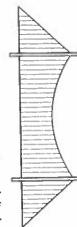
b) Graph each relation in part a using a graphing calculator and determine its x-intercepts. Fill in the last column of the table with your answers.



7. A roadway on a bridge is supported by two towers with a cable that joins them.



equation $y = 0.00036x^2 + 4$. The cables between the towers hang in a parabolic shape that can be represented with the

- a) Graph the relation $y=0.00036x^2+4$ on a graphing calculator. b) Identify the minimum or maximum value and the coordinates of the vertex.
- c) Identify the y- and x-intercepts

8.4 Solve Problems Involving Quadratic Relations 8. The cost (in thousands of dollars) to produce items in a computer component manufacturing plant is given by the relation $C = 2x^2 - 29x + 100$, where x represents the number of hundreds a) Profit is defined as the difference between the revenue and the cost. Using $P=R=C_{\star}$ of items produced. The revenue these items produce (in thousands of dollars) is given by the relation $R = x^2 - 10x + 250$, where x represents the number of hundreds of items sold. as well as the two relations above, develop a profit relation for the company.

c) Determine the zeros of the profit relation.	b) Graph your relation from part a on a graphing calculator.
	culator.

- d) How many items should be produced to maximize profit?
- e) What will be the maximum profit?

Chapter 8 Review • MHR 127

			•
tickets will be sold.	by \$2 per ticket but they also believe that for each \$2 increase, 60 fewer	concert at \$20 per ticket. The committee plans to increase prices this year	9. The local community theatre group sold 1200 tickets for the holiday

	_	3	
III	70	읐	
巛	evie	pte	1
III	~	Ġ	l

Date:

 a) Define your variables, then write the revenue relation that describes the ticket sales.

Tickets sold (n)	Ticket price (\$)	complete the table of values.				
1200	20	of value				
	22	155			ĺ	
_						
	_					
- 1	- 1		21	1	- 1	- 1

b) Complete

Revenue (\$)

24 000

٩
포
W .
nan
<u> </u>
ke
===
ısı
Se
SOL d
5
reac
Ħ
ie I
XEC
1
3
01:11
rev
CDU
ေ
10

<u>c</u>
What is the in
SO
हि
maximum to
total
otal revenue?