Name: _____   Date: _____

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║  MAT 1460- ____  Homework                  ║
║         Section 3.1                        ║
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Support your answer by showing your work.

1. Given the function: $$f(x) = \frac{x+1}{x^2 - 2x - 15}$$	a) Find $f(2)$.
	b) Find $f(-2)$.
	c) State the domain of the function.
2. Given the function $f(x) = x^2 - 2x$.	b) Find the difference quotient $\frac{f(x+h)-f(x)}{h}$.
a) Find $f(m-3)$	
3. A bike factory has monthly fixed costs of $17,500 per month. In addition, it costs $15 to produce each bicycle. They can sell each bicycle for $65.	a) Find the rule of the cost function $c(x)$ that gives the monthly cost of producing x bicycles.
	b) Find the rule of the revenue function $r(x)$ that gives the monthly revenue from selling x bicycles.
	c) Find the rule of the profit function $p(x)$ that gives the monthly profit from producing and selling x bicycles.