

Name: _____

1. [2 parts, 1 point each] For each of the following functions, find $f(-2)$.

(a) $f(x) = x^3 + 1$

(b)

x	-3	-2	-1	0	1	2	3	4
$f(x)$	5	8	1	0	4	3	9	6

2. [2 points] The gas mileage M of a car (in miles per gallon) is a function of the speed s of the car (in miles per hour). Translate the statement $M(40) = 35$ into English. Be sure to include proper units.

3. [3 points] Give the equation of the line passing through $(1, 5)$ and $(4, -8)$ in the form $y = mx + b$.

4. [**3 parts, 1 point each**] Annual revenue R from a restaurant chain can be estimated by $R = 0.4t + 5.6$, where R is in billion dollars and t is in years since January 1, 2007.

(a) What is the slope of this function? Include units and interpret the slope in English.

(b) What annual revenue does the function predict for 2011? Include units.

(c) In which year is the annual revenue predicted to pass 11 billion dollars?