Advanced Algebra
Homework 2.2
Piece-wise Functions

Name _____

Period _____

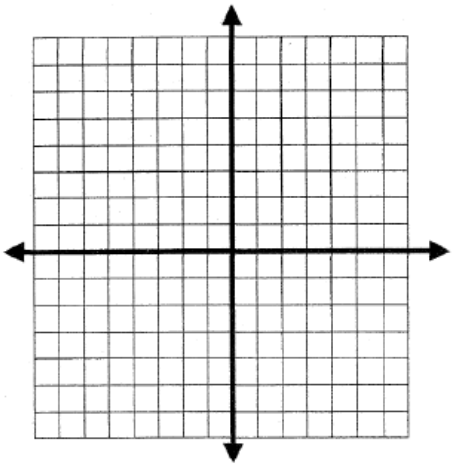
SHOW ALL WORK.

Complete Parts A & B OR Parts B & C

PART A:

Graph each function without a calculator.

1. $f(x) = \begin{cases} 2x+3, & x<0 \\ 3-x, & x \geq 0 \end{cases}$



Evaluate the following:

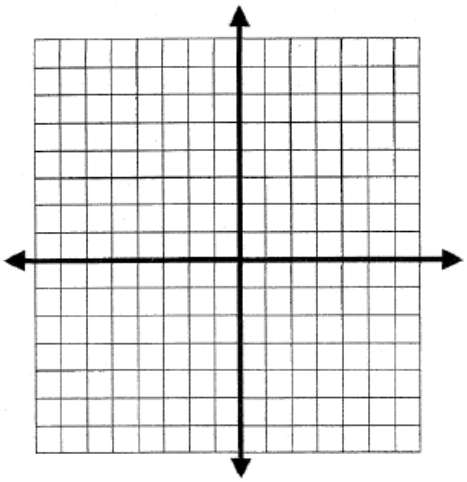
$f(0) =$

$f(-3) =$

$f(2) =$

PART B:

2. $f(x) = \begin{cases} x+3, & x \leq 0 \\ 3, & 0 < x \leq 2 \\ 2x-1, & x > 2 \end{cases}$

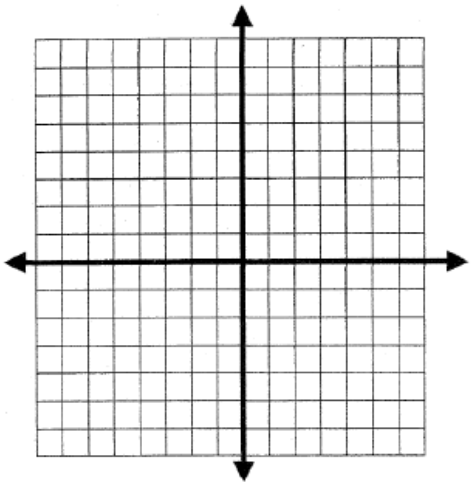


Evaluate the following:

$f(-1) =$

$f(1) =$

3. $f(x) = \begin{cases} 3x+5, & x \leq -2 \\ x-4, & x > 2 \end{cases}$



Evaluate the following:

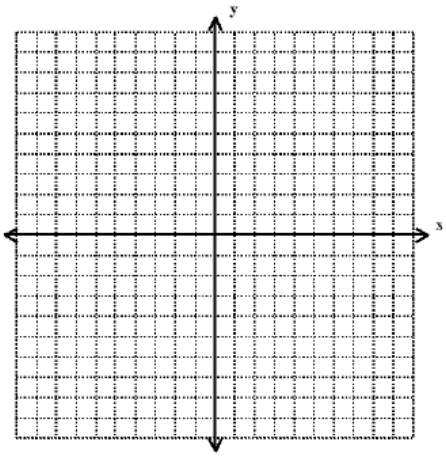
$f(2) =$

$f(-3) =$

$f(0) =$

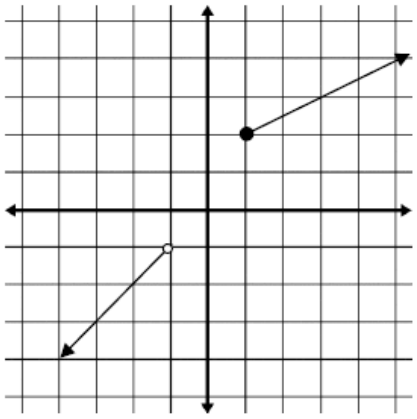
4. Graph the piecewise function and evaluate it at the given values of x.

$$f(x) = \begin{cases} 2x - 1, & x \le -2 \\ 4, & -2 < x \le 3 \\ -x + 2, & x > 3 \end{cases}$$



Evaluate. $f(-4) =$

$f(3) =$

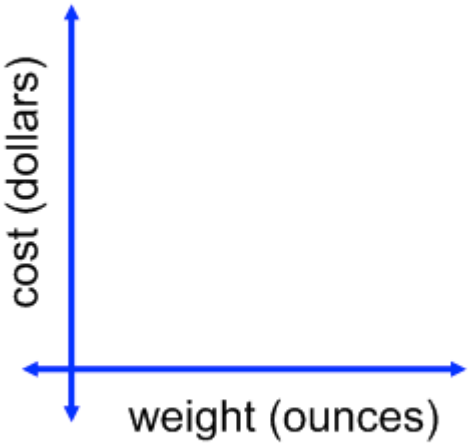
5. 

Write the piecewise function for the graph.

PARTC:

6. In 2005, the cost C (in dollars to send Express Mail up to 5 pounds depended on the weight (w) in ounces according to the function below:

C(w) = \$13.65 if $0 < w < 8$
\$17.85 if $8 < w < 32$
\$21.05 if $32 < w < 48$
\$24.20 if $48 < w < 64$
\$27.30 if $64 < w \le 80$



a. Graph the function

b. What is the cost to send a parcel weighing 2 pounds 9 ounces?
(hint: convert weight to ounces)