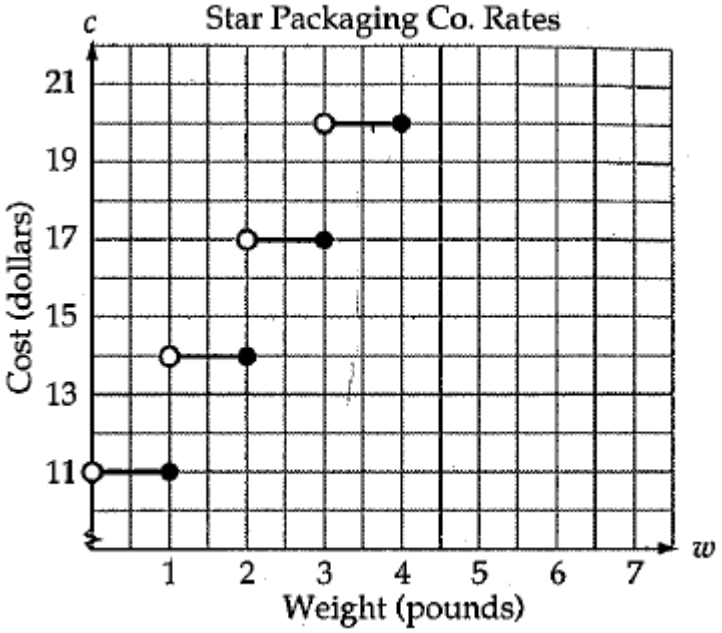
Name: _____ Date: _____ Period: _____
Intermediate Algebra
4.3 C – Evaluating Piecewise Functions

1. The Star Packaging Company charges $11 for shipping and handling any package weighing one pound or less. Each additional pound of fraction of a pound will cost $3 more, as indicated by the graph.

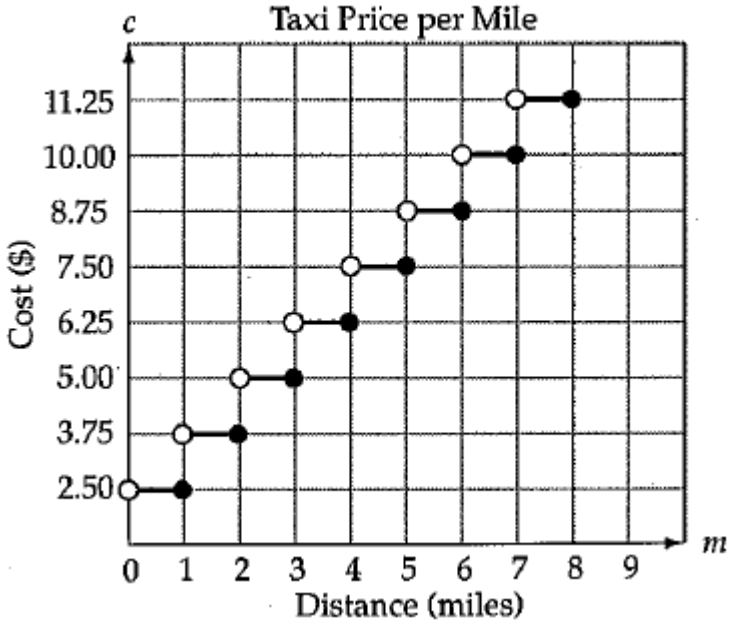



a. What is the total cost of sending 3 separate packages weighing 1.8 pounds, 3.7 pounds, and 4 pounds?

b. If it costs $17 to send a particular package, what could have been the weight of the package?

c. Mary reasons that since an additional pound costs $3, an additional half-pound will cost $1.50. Is this true? Justify your response.

2. On a city taxi meter, the cost begins at $2.5o per person for the first mile plus $1.25 for every additional mile or fraction of a mile thereafter. The following step function graph illustrates the distance/cost relationship. Use the graph to answer the questions.



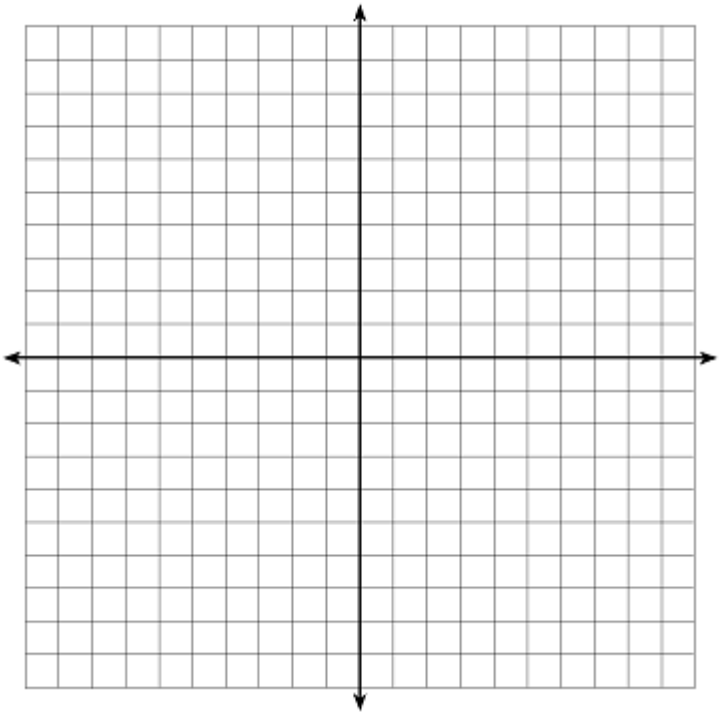

a. If Mark takes the city taxi an travels 3.7 miles, what is his cost for the taxi ride?

b. If the cost to travel from the airport to his office is $8.75, how many miles does he travel?

c. If Mark also gave a 15% tip to the driver that drove him from the airport, what did it cost him (to the nearest dollar)?

Graph

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



Evaluate the following:

$f(0)=$

$f(-3)=$

$f(2)=$

Evaluate the following

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

f(7) f(4) f(-3)

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

f(7) f(0) f(1) f(-1)