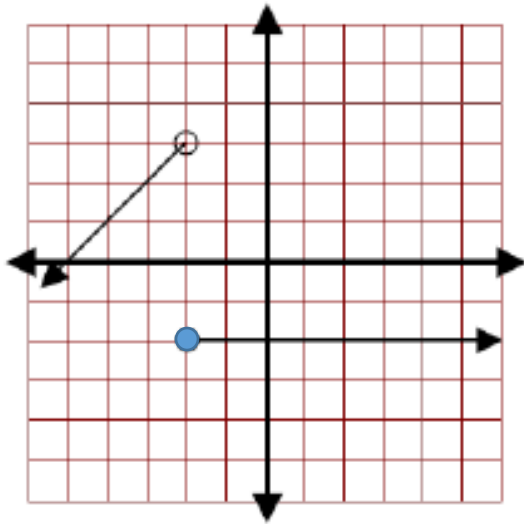


1. Given the following piecewise function $f(x)$:



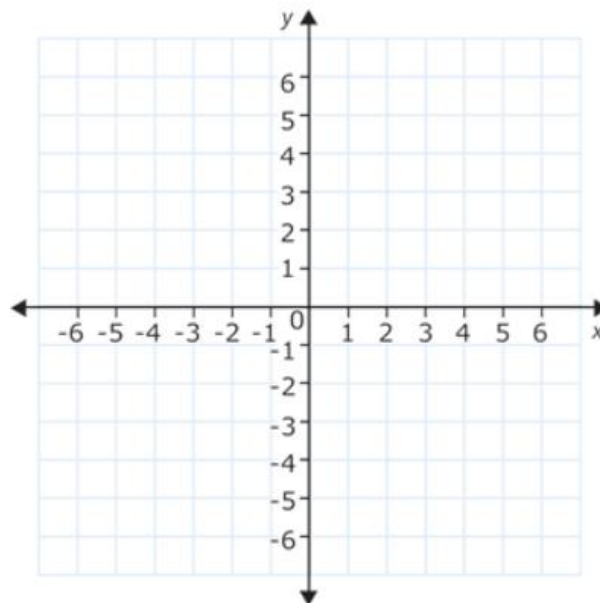
- a. State the domain:
- b. State the range:
- c. Find $f(-15)$
- d. Find $f(-2)$
- e. Find $f(5.6)$

f. Is this function continuous or non-continuous?

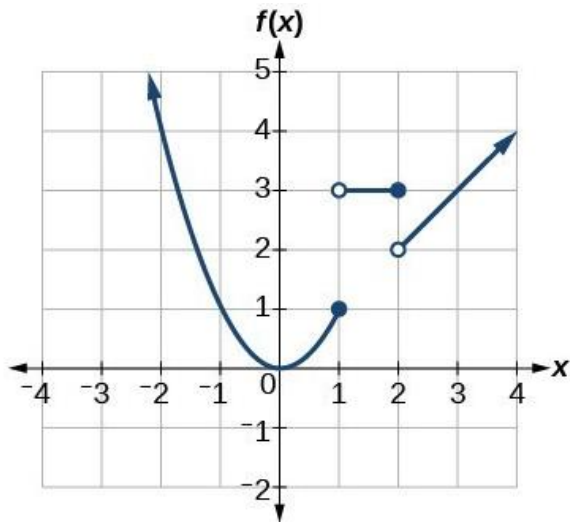
g. Define the function graphed above

2. Graph the following piecewise function and state the domain/range.

$$h(x) = \begin{cases} -2x - 6 & -6 \leq x < 0 \\ \frac{1}{2}x - 6 & 0 \leq x \leq 4 \end{cases}$$

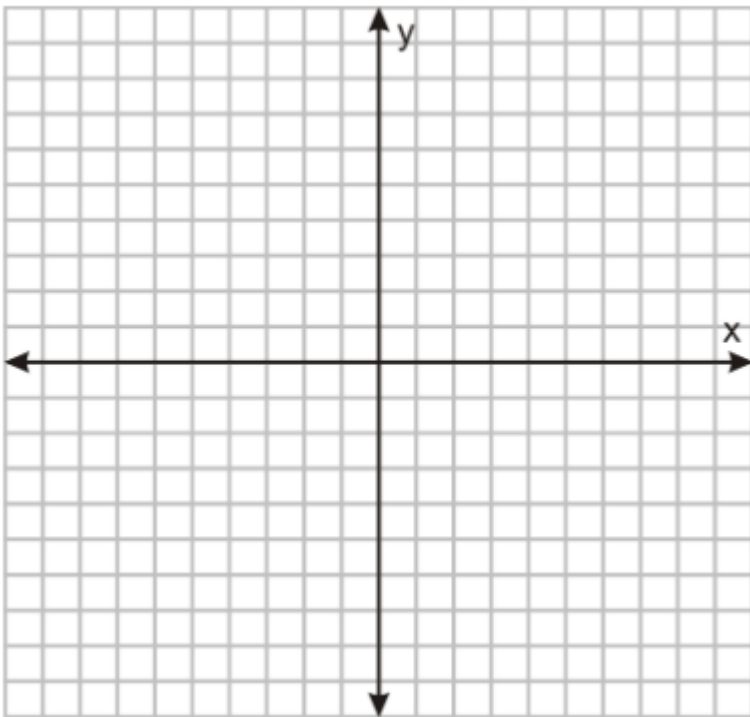


3. Define the piecewise function below.

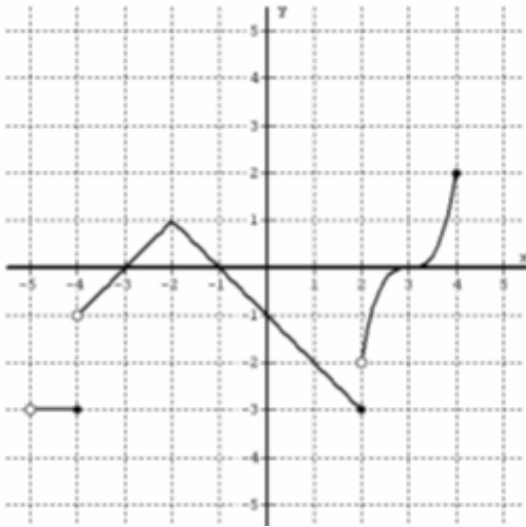


4. Graph the piecewise function below:

$$f(x) = \begin{cases} -(x+1)^2 & x < 1 \\ 7 & x = 1 \\ 2\sqrt{x} + 3 & 1 < x \leq 9 \end{cases}$$



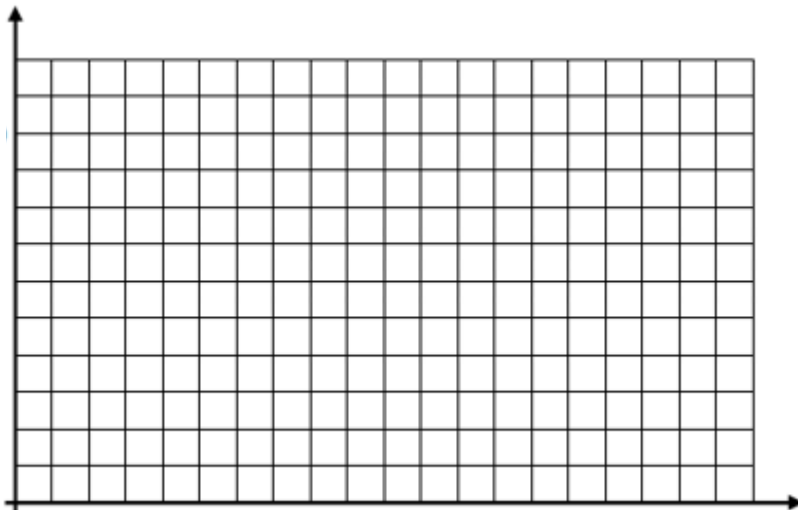
5. Define the following piecewise function



6. A mechanic charges \$150 for the first hour of labor. He then charges \$80 for each additional hour.

a. Write the piecewise function that defines the amount charged, C , based on the number of hours of labor h

b. Graph the piecewise function



c. How much would the mechanic charge you if he worked on your car for 3.5 hours?