

Provide a clear and organized presentation. Show all of your work and completely simplify your answer.

1. Clearly sketch the graph of  $y = f(x)$  if  $f(x) = \begin{cases} 3 - 2x & \text{if } x < -1 \\ x^2 & \text{if } x \geq -1 \end{cases}$
  
2. The value,  $f(x)$  measured in dollars, of a particular painting from a local painter is given by  $f(x) = 58.35x + 756.47$  where  $x$  is the age of the painting measured in years.
  - i) Identify the slope and give a meaningful interpretation of it.
  - ii) Determine the  $y$ -coordinate of the  $y$ -intercepts and give a meaningful interpretation of it.