NAME:

1. (5 points) Let  $f(x) = x^2 - 4$ . Find f(a+1).

2. (5 points) Recall the shape of the basic graph  $y=x^2$ . Use transformations to make a sketch of the related function  $y=-2(x-1)^2+1$ .

3. (10 points) Put the function

$$f(x) = 2x^2 + 8x - 7$$

into vertex form by completing the square.