1. A function f is defined by $f(x) = -x^2 + x - 4$. Find the following values of $f(x)$. Your answers to this question will all be numbers.

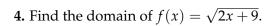a) $f(-3) =$

b) $f(0) =$

c) $f(4) =$

2. A function g is defined by $g(t) = 5t^2 + t + 3$. Express the following function values in terms of x:

a) $g(x+2) =$

b) $g(x) + 2 =$

3. Let $h(x)$ be defined on positive real numbers as follows:

1. Start with a number x.

2. Take the square root of the number and add 6 more than the number you started with.

3. Square the result and add 3 more than the original number.

4. Finally, divide the result by 2 less than the square of the original number.

Write a formula for $h(x)$.

4. Find the domain of $f(x) = \sqrt{2x+9}$.

5. Find the domain of $g(x) = \sqrt{x^2 - 16}$.

6. Let $h(x)$ be a *linear function* such that $h(3) = 3$ and $h(4) = 0$.

   a) List two points which are on the graph of $h(x)$.

   b) $h(x)$ is linear, so its graph is a line. Find the slope of the graph of $h(x)$ using your answer to a).

   c) Find an expression $h(x)$.