



4. Give the domain and find  $q(3)$  for the function  $q$  given by  $q(z) = \frac{1}{z^2-9}$ .

a. Domain:

b.  $q(3)$

5. Evaluate the piecewise function  $f$  given by  $f(x) = \begin{cases} x^2 + 2 & x \leq 1 \\ 2x^2 + 2 & x > 1 \end{cases}$  for the following values.

a.  $f(-3)$

b.  $f(1)$

c.  $f(5)$

6. Evaluate the difference quotient  $\frac{f(x+h)-f(x)}{h}$  for the function  $f$  given by  $f(x) = 2x^2 + 3x - 1$ .

