

## The Average Rate of Change of a Function (2.4)

More practice:

Find the average rate of change of the function over the given interval .

1.  $f(x) = x^3 + 1$ ,  $[-1, 1]$
2.  $h(t) = \cot t$ ,  $\left[\frac{\mathbf{p}}{6}, \frac{\mathbf{p}}{2}\right]$
3.  $g(t) = 2 + \cos t$ ,  $[0, \mathbf{p}]$
4.  $R(\mathbf{q}) = \sqrt{4\mathbf{q} + 1}$ ,  $[0, 2]$

Calculate  $\frac{f(x+h) - f(x)}{h}$  for the given functions.

5.  $f(x) = 4 - x^2$
6.  $g(t) = \frac{1}{t^2}$
7.  $k(z) = \frac{1-z}{2z}$
8.  $p(\mathbf{q}) = \sqrt{3\mathbf{q}}$
9.  $r(s) = \sqrt{2s+1}$
10.  $f(x) = \frac{x-1}{x+1}$
11.  $f(x) = \frac{1}{x-1}$