Find  $\frac{f(x+h)-f(x)}{h}$  for each of the following.

1. 
$$f(x) = x^2 - 5x - 1$$

2. 
$$f(x) = 3x^2 - 4x$$

3. 
$$f(x) = 2x^2 + 3x - 1$$

4. 
$$f(x) = 3x^2 + x - 5$$

5. 
$$f(x) = x^3 - 4x^2 + 5x$$

$$6. \quad f(x) = \frac{1}{x}$$

## Homework

Find  $\frac{f(x+h)-f(x)}{h}$  for each of the following.

$$1. \quad f(x) = 3x + 2$$

2. 
$$f(x) = x^2 + 1$$

3. 
$$f(x) = x^2 + 3x - 4$$

4. 
$$f(x) = 2x^2 - 5x + 3$$

5. 
$$f(x) = 3 - 5x + 4x^2$$

6. 
$$f(x) = x^3 - 6x^2 + 12x - 8$$