

**Worksheet 9**  
**Functions**

1. Given  $f(x) = x^2 + 1$  and  $g(x) = x - 3$ .
  - (a) Solve the value of  $f(g(2))$ .
  - (b) Determine the values of  $x$  if  $g(f(x)) = 7$ .
  - (c) Identify  $g^{-1}(5)$ .
2. Identify the inverses of the following functions.
  - (a)  $y = 3x + 2$
  - (b)  $y = \frac{1}{4-x}$
3. Determine whether the relation given is a function. Explain your answer.

Domain	Range
2	6
5	7
6	9
6	10

4. Identify the value of
  - (a)  $\lfloor -3.2 \rfloor$
  - (b)  $\lceil -9.45 \rceil$
  - (c)  $\lceil \lfloor 3.89 + 2.3 \rfloor \times 2 \rceil$