

**1. Give an example for a natural number, a negative integer, a rational number and an irrational number**

Natural number: 5  
Negative integer: -3  
Rational number: 1.5  
Irrational number: Pi

**2. Which of the following is true?**

- (a) Every real number is rational: False
- (b) Every integer is rational: True
- (c) Every natural number is a real number: True

**3.**

Function argument: x  
Function value:  $2x + 3$   
Domain: N  
Codomain: R  
Image: {3, 5, 7, 9, 11, 13}

$$4) \hat{f}(x) = f(x-3) - 2 \\ = e^{x-3} - 2$$

$$5) \hat{f}(x) = 2 e^{2x}$$

$$6) \hat{f}(x) = 0.5 e^{0.5x}$$