

1. Let  $f$  be a function defined in  $\mathbb{R}$  as  $f(x) = x^3$ .

$f$  is continuous function.....

2. Consider a function  $f: \mathbb{R} \rightarrow \mathbb{R}$  defined as

$$f(x) = 2, \text{ if } x < 5$$

$$= 3 \text{ if } x \geq 5.$$

$f$  is a continuous function.....

3. Let  $f$  be a function defined in  $\mathbb{R}$  as  $f(x) = x - 2$ .

$f$  is discontinuous at  $x = 2$ .....

4. Consider a function  $f: \mathbb{R} \rightarrow \mathbb{R}$  defined as

$$f(x) = x - 2, \text{ if } x < 4$$

$$= 2x - 6, \text{ if } x \geq 4$$

$f$  is a continuous function at  $x = 4$ .....

5. The following function is discontinuous function.

