Answer on Question #42763 – Math – Algebra

Question:

A function f : R → R is defined by f(x)={3+x if -3 ≤ x < 0; 3 - x if 0≤ x<3; x-3 if 3 ≤ x < 6}

Find x when f(x) = 3.

A) 6

B) −3

C) 0

D) Cannot determined

Answer:

f(x) = 3 then

3+x = 3 if -3 ≤ x < 0;

3 - x = 3 if 0≤ x<3;

x-3 = 3 if 3 ≤ x < 6

From the first equation we can see that x = 0, but in the other hand -3 ≤ x < 0 that's why is solution isn't correct;

from the second equation we can see that **x = 0**, but if **0≤ x<3** that's why is solution **is correct**;

from the third equation we can see that x = 6, but in the other hand 3 ≤ x < 6 that's why is solution isn't correct.

Answer: C) 0