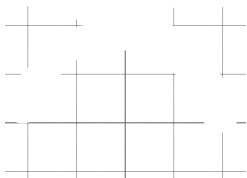


NOTES

2.1 Application and Extension



For 3-4, determine whether each of the situations describes a function. Give a reason for your answer.

3) The height of a thrown ball is a function of the time spent in the air

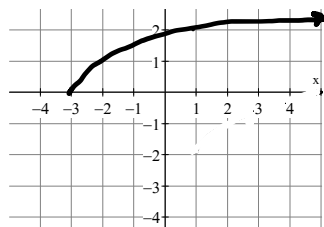
This is a function because any given time, the ball only has one height

4) The time a thrown ball spends in the air is a function of the height of the ball.

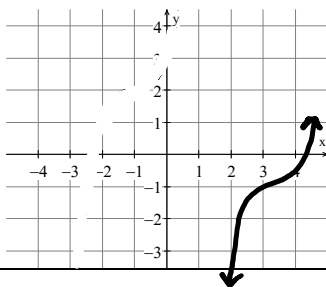
This is not a function because the ball can hit the same height twice with each having a different time. For example, the ball may reach a height of 3 feet on its way up at 1 second and on its way down at 5 seconds.

Skillz Review: Write the function of each graph using $f(x) = \sqrt{x}$, $f(x) = x^3$, $f(x) = |x|$, or $f(x) = x^2$.

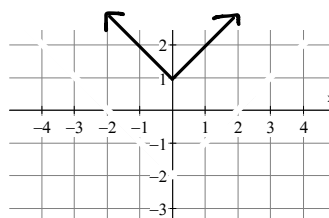
1) $f(x) = \sqrt{x+3}$



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



3) $f(x) = |x| + 1$



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

