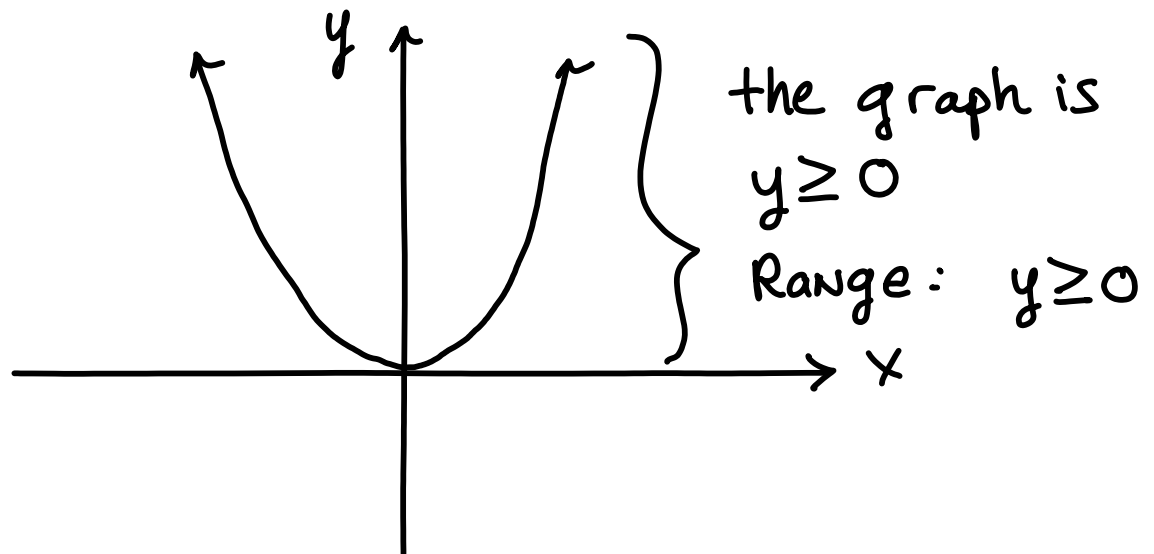
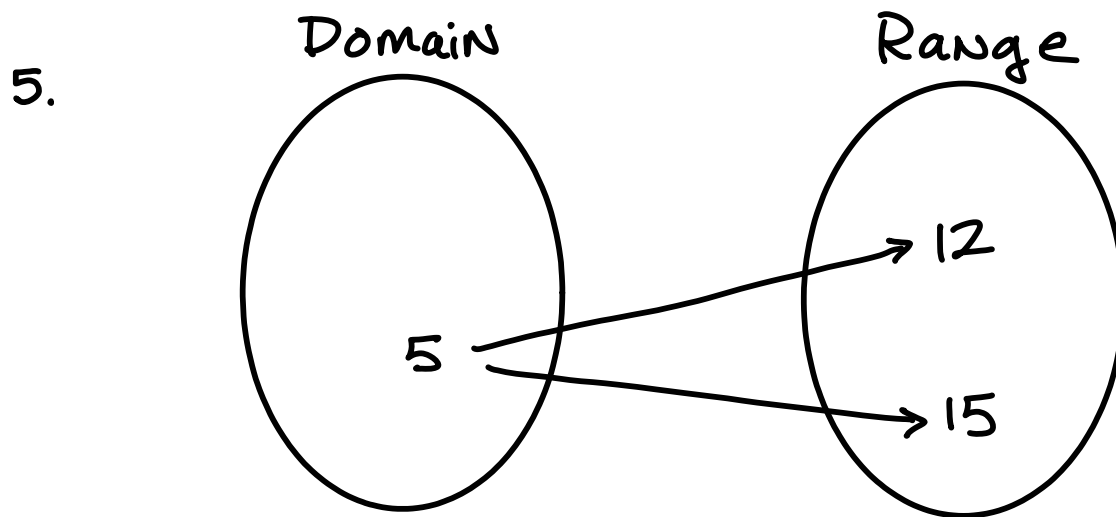


1. False
2. Domain - the set of all values that can be input into a function
3. Yes the graph is of a function because it passes the VLT (Vertical Line Test)
4. Range of $f(x) = x^2$ $y \geq 0$
 use a graph to find range





This is a relation not a function; it fails to be a function because each domain value can map to only one range value - 5 is mapping to both 12 and 15.

6. Yes, the graph of $f(x) = 2x + 4$ is a line and function (passes the VLT)

7. The VLT (Vertical Line Test) is a graphical method to determine if a relation is a function. The graph is a function if a vertical line will cross the graph once any place on the graph.

$$8. \quad f(x) + g(x) = \frac{3}{2}x - 2$$
$$(2x + 1) + (-\frac{1}{2}x - 3) = \frac{3}{2}x - 2$$

$$9. \quad -3f(x) - g(x) = -\frac{11}{2}x$$
$$-3(2x + 1) - (-\frac{1}{2}x - 3) =$$
$$-6x - 3 + \frac{1}{2}x + 3 =$$
$$-\frac{11}{2}x$$

