**Summary 1: Functions and Domains**

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| **Function:** a rule that assigns to every number *x* from the domain ***D*** exactly one value *y* or *f(x)* in the range ***R***.  **Domain**: all numbers that you can plug in to a function legally. Usually involves solving an equation or an inequality.  **Range:** all outcomes from a function. Usually hard to find.  Functions are best given in algebraic form or by showing their graph. | **Example**: Domain of  We need . To solve an inequality, first solve equality, then use test numbers on the number line:  so that  Domain |