3.3 Graphs of Basic Functions; Piecewise Functions

Types of functions:

Constant:

Linear:

Square:

Cube:

Square root:

Cube root:

Absolute value:

Reciprocal:

1. If, find

For the following, find (a) Domain; (b) Range; (c) any intercepts; (d) and then graph the function.

1. ℝ
2. ℝ  
    ℝ

ℝ

1. Steve Forbes, a presidential candidate in 1996, proposed a flat tax to replace the existing U.S. income tax system. In his tax proposal, every adult would pay $0.00 in taxes on the first $13,000 earned. They would then pay a flat tax of 17% on everything over $13,000. Forbes’s tax plan is actually a piecewise-defined function.  
    a. According to Forbes’s plan, how much in taxes are owed for someone earning $50,000.  
      
      
    b. Find the piecewise function, , that describes the amount of taxes paid. *T*, as a function of the dollars earned, *x*, for Forbes’s tax plan.