

## Use graph paper for this assignment

Please give a nice, accurate sketch, using numerous accurate points for each graph, the goal is to see what is going on from the parent function

In Exercises 29–34, use your graphing calculator to produce a graph of the function. Then determine the domain and range of the function by looking at its graph.

**29.**  $f(x) = x^2 - 5$

**30.**  $g(x) = |x - 4|$

**31.**  $h(x) = \ln(x + 6)$

**32.**  $k(x) = 1/x + 3$

**33.**  $s(x) = \text{int}(x/2)$

**34.**  $p(x) = (x + 3)^2$

**Please give a nice, accurate sketch, using numerous accurate points for each graph, the goal is to see what is going on from the parent function**

In Exercises 45–52, sketch the graph of the piecewise-defined function. (Try doing it without a calculator.) In each case, give any points of discontinuity.

$$45. f(x) = \begin{cases} x & \text{if } x \leq 0 \\ x^2 & \text{if } x > 0 \end{cases}$$

$$46. g(x) = \begin{cases} x^3 & \text{if } x \leq 0 \\ e^x & \text{if } x > 0 \end{cases}$$

$$47. h(x) = \begin{cases} |x| & \text{if } x < 0 \\ \sin x & \text{if } x \geq 0 \end{cases}$$

$$48. w(x) = \begin{cases} 1/x & \text{if } x < 0 \\ \sqrt{x} & \text{if } x \geq 0 \end{cases}$$

$$49. f(x) = \begin{cases} \cos x & \text{if } x \leq 0 \\ e^x & \text{if } x > 0 \end{cases}$$

$$50. g(x) = \begin{cases} |x| & \text{if } x < 0 \\ x^2 & \text{if } x \geq 0 \end{cases}$$

$$51. f(x) = \begin{cases} -3 - x & \text{if } x \leq 0 \\ 1 & \text{if } 0 < x < 1 \\ x^2 & \text{if } x \geq 1 \end{cases}$$

$$52. f(x) = \begin{cases} x^2 & \text{if } x < -1 \\ |x| & \text{if } -1 \leq x < 1 \\ \text{int}(x) & \text{if } x \geq 1 \end{cases}$$