

MCR 3U

Fun, Fun, Fun with Functions!

Complete the following tasks for each of the functions below:

- 1) state the basic function
- 2) create table of values for the basic function
- 3) determine the **mapping notation** that maps the basic function coordinates onto the image function
- 4) create a table of values for the image function
- 5) **GRAPH** the basic function and the image function on the same grid (use two different colours)
- 6) use your graphs to determine the **domain** and **range** of each of the image functions (use proper notation when stating the domain and range)

IMAGE FUNCTION

Example 1

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

Example 2

$$y = \frac{1}{2}(x + 2)^3 - 3$$

Example 3

$$y = \sqrt{-\frac{1}{2}x - 2}$$

Example 4

$$y = -\frac{1}{x} + 2$$

Example 5

$$y = |-2x + 6| + 4$$

Example 6

$$y = -(x - 5)^2 - 3$$

\* keep your work neat, tidy and organized (follow the procedure we have been doing in class)