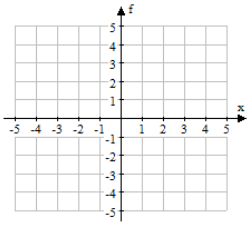
Unit 5 – Domain and Range Comparison
Linear, Quadratic, or Exponential Functions

Name: _____

1. Determine the Domain and Range of each of the following graphed functions (using Interval and Set Notations).
Hint: Graph using Desmos to help you quickly visualize and move the graphs.

A. $m(x) = 2(x-1)^2 - 3$



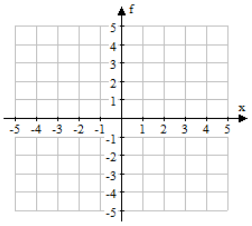
Domain (INTERVAL): _____

Domain (SET): _____

Range (INTERVAL): _____

Range (SET): _____

B. $p(x) = 2^x + 1$



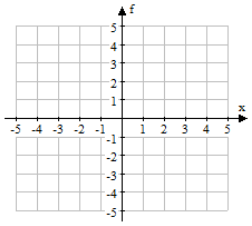
Domain (INTERVAL): _____

Domain (SET): _____

Range (INTERVAL): _____

Range (SET): _____

C. $q(x) = 2x - 4$



Domain (INTERVAL): _____

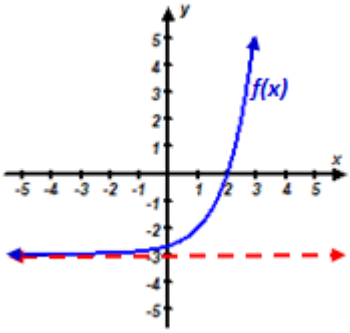
Domain (SET): _____

Range (INTERVAL): _____

Range (SET): _____

2. Determine the Domain and Range of each of the following graphed functions (using Interval and Set Notations).

A.



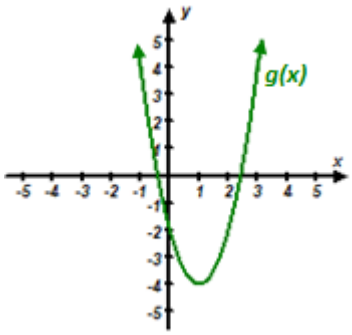
Domain (INTERVAL): _____

Domain (SET): _____

Range (INTERVAL): _____

Range (SET): _____

B.



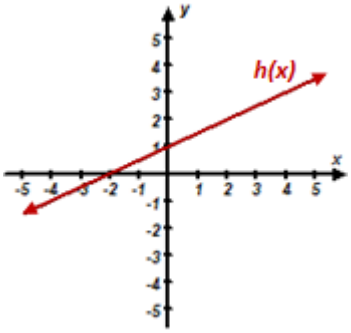
Domain (INTERVAL): _____

Domain (SET): _____

Range (INTERVAL): _____

Range (SET): _____

C.



Domain (INTERVAL): _____

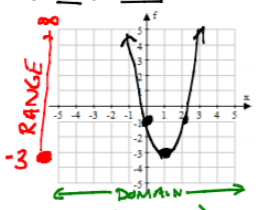
Domain (SET): _____

Range (INTERVAL): _____

Range (SET): _____

Answers to #1:

A. $m(x) = 2(x-1)^2 - 3$



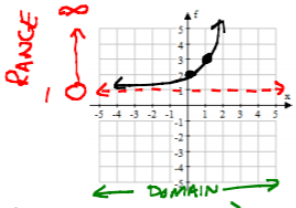
Domain (INTERVAL): (-∞, ∞)

Domain (SET): ALL REALS (ℝ)

Range (INTERVAL): [-3, ∞)

Range (SET): m(x) ≥ -3

B. $p(x) = 2^x + 1$ ← ASYM: y=1



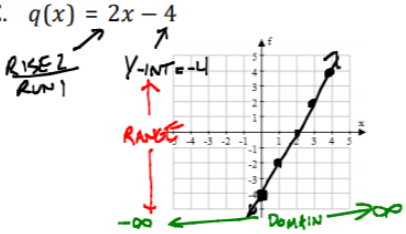
Domain (INTERVAL): (-∞, ∞)

Domain (SET): ALL REALS (ℝ)

Range (INTERVAL): (1, ∞)

Range (SET): p(x) > 1

C. $q(x) = 2x - 4$



Domain (INTERVAL): (-∞, ∞)

Domain (SET): ALL REALS (ℝ)

Range (INTERVAL): (-∞, ∞)

Range (SET): ALL REALS (ℝ)