Station 1:

1) Domain: All possible x-values (left to right)

Range: All possible y-values (bottom to top)

2) Domain: $(-\infty, +\infty)$

Range: $(-\infty, -3]$

3) Domain: $[-1.5, 1.5]$

Range: $[-1, 3]$

4) Domain: $(-\infty, +\infty)$

Range: $[1, +\infty)$

5) Domain: $[0, 5]$

Range: $[-2, 3]$

6) Domain: $(-2, 3)$

Range: $[-2, 2]$

7) Domain: $[2, +\infty)$

Range: $(-\infty, -1]$

Station 2:

1) End Behavior "Sentence Starters": Left: $x \to -\infty$ $y \to$ Right: $x \to +\infty$ $y \to$

2) Intercepts: Where the graph crosses the x or y-axis

3) End Behavior: L: $x \to -\infty$ $y \to +\infty$ R: $x \to +\infty$ $y \to +\infty$

Intercepts: $(0,1)$ $(\frac{1}{2}, 0)$ $(3.5, 0)$

4) End Behavior: L: $x \to -\infty$ $y \to -\infty$ R: $x \to +\infty$ $y \to -\infty$

Intercepts: $(2,0)$ $(4,0)$

5) End Behavior: L: $x \to -\infty$ $y \to +\infty$ R: None

Intercepts: $(0,1)$ $(1,0)$ $(4,0)$

6) End Behavior: L: None R: $x \to +\infty$ $y \to +\infty$

Intercepts: $(3,0)$

7) End Behavior: L: $x \to -\infty$ $y \to -\infty$ R: $x \to +\infty$ $y \to +\infty$

Intercepts: $(0, .25)$ $(.25, 0)$

8) End Behavior: L: $x \to -\infty$ $y \to -\infty$ R: $x \to +\infty$ $y \to -\infty$

Intercepts: none

Station 3:

1) Increasing: Look at where the graph rises from L to R

Decreasing: Look where the graph falls from L to R

2) Increasing: $(-\infty, -1) \cup (1, +\infty)$

Decreasing: $(-1, 1)$

3) Increasing: $(-\infty, 3)$

Decreasing: $(3, +\infty)$

4) Increasing: $(-\infty, +\infty)$

Decreasing: N/A

5) Increasing: N/A

Decreasing: $(2, +\infty)$

6) Increasing: $(2, +\infty)$

Decreasing: $(-\infty, 2)$

7) Increasing: $(1, 2) \cup (4, 5)$

Decreasing: $(-\infty, 1) \cup (2, 4)$

Station 4:

Graph 1:

Function Family/Equation: polynomial (cubic)

Domain: $(-\infty, +\infty)$

Range: $(-\infty, +\infty)$

Increasing: $(-\infty, +\infty)$

Decreasing: N/A

Intercepts: $(0,0)$ → both

Symmetry: Odd

Asymptotes: none

End Behavior:

L: $x \to -\infty$, $y \to -\infty$ R: $x \to +\infty$, $y \to +\infty$

Graph 2:

Function Family/Equation: exp. decay

Domain: $(-\infty, +\infty)$

Range: $(0, +\infty)$

Increasing: NA

Decreasing: $(-\infty, +\infty)$

Intercepts: $(0, 1)$

Symmetry: none

Asymptotes: $y = 0$

End Behavior:

L: $x \to -\infty$, $y \to +\infty$ R: $x \to +\infty$, $y \to 0$