

Function Families Review Answer Document

Key

1) Function Name: Polynomial (even) ^{2B)}

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

Range: $(0, \infty)$

Decreasing: $(-\infty, 0)$

Increasing: $(0, \infty)$

x-intercepts: $(0, 0)$

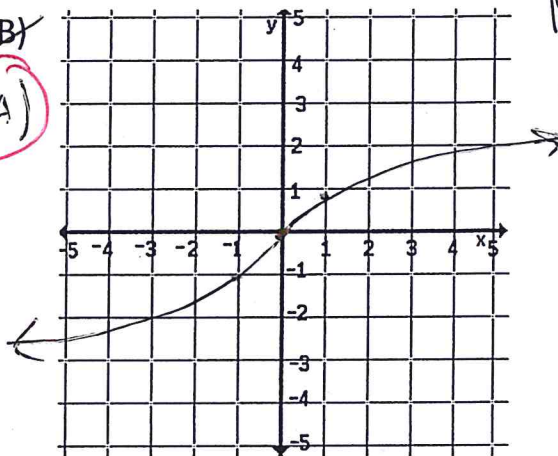
y-intercepts: $(0, 0)$

Left End: _____

As $x \rightarrow -\infty, y \rightarrow \infty$

Right End: _____

As $x \rightarrow \infty, y \rightarrow \infty$

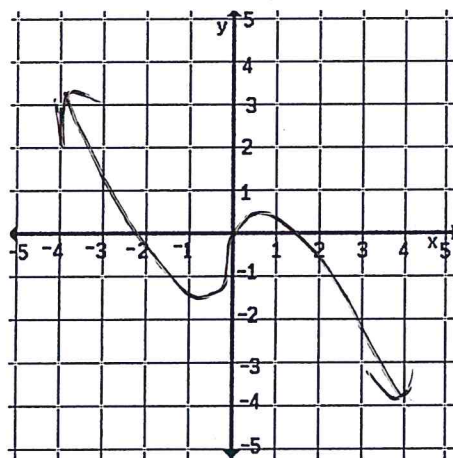


Equation: $f(x) = x^3$

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

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

3A)

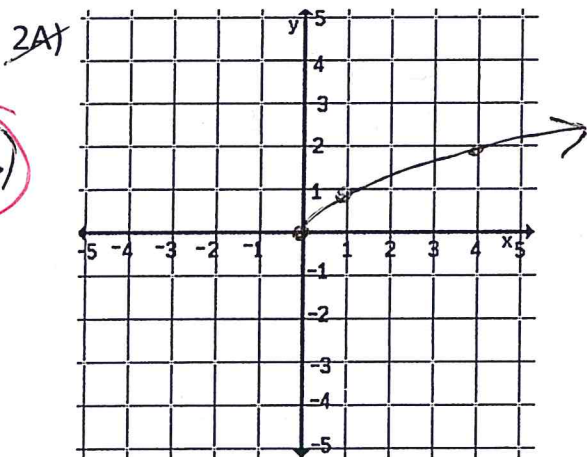


LEFT END: _____

As $x \rightarrow -\infty, y \rightarrow \infty$

RIGHT END: _____

As $x \rightarrow \infty, y \rightarrow -\infty$



Equation: $f(x) = \sqrt{x}$

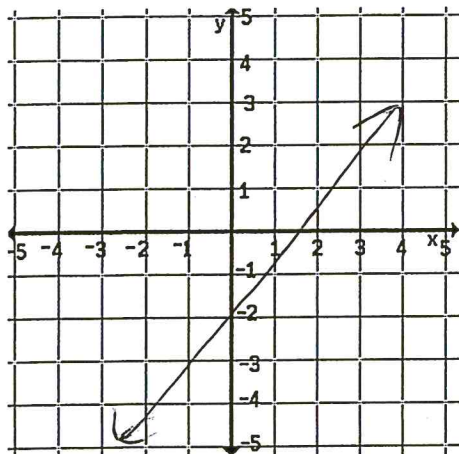
Domain: $[0, \infty)$

Range: $[0, \infty)$

* out of order

Function Families Review Answer Document

3B)



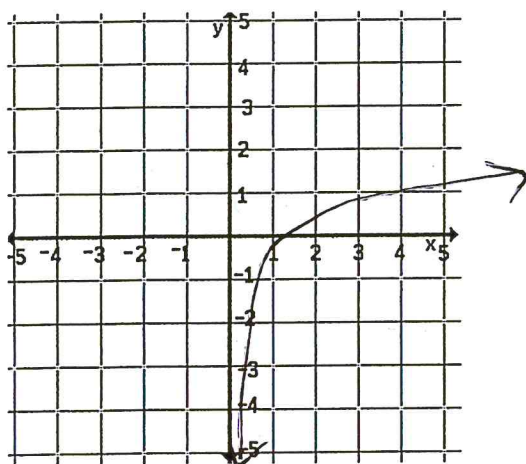
LEFT END: _____

As $x \rightarrow \infty, y \rightarrow \infty$

RIGHT END: _____

As $x \rightarrow -\infty, y \rightarrow \infty$

3C)



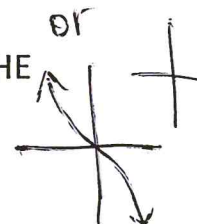
LEFT END: _____

* As $x \rightarrow 0, y \rightarrow -\infty$

RIGHT END: _____

As $x \rightarrow \infty, y \rightarrow \infty$

4) USE WHITE PAPER ON TABLE TO
CREATE A GRAPH THAT SATISFIES THE
GIVEN CONDITIONS.



5)

- a) radical (odd)
- b) absolute value
- c) polynomial (even)
- d) exponential (decay)
- e) linear
- f) polynomial (odd)

6)

DOMAIN: $[-5, \infty)$

RANGE: $(-\infty, 3]$

INCREASING: $(1, 2)$

DECREASING: $(-4, 0) \cup (2, \infty)$

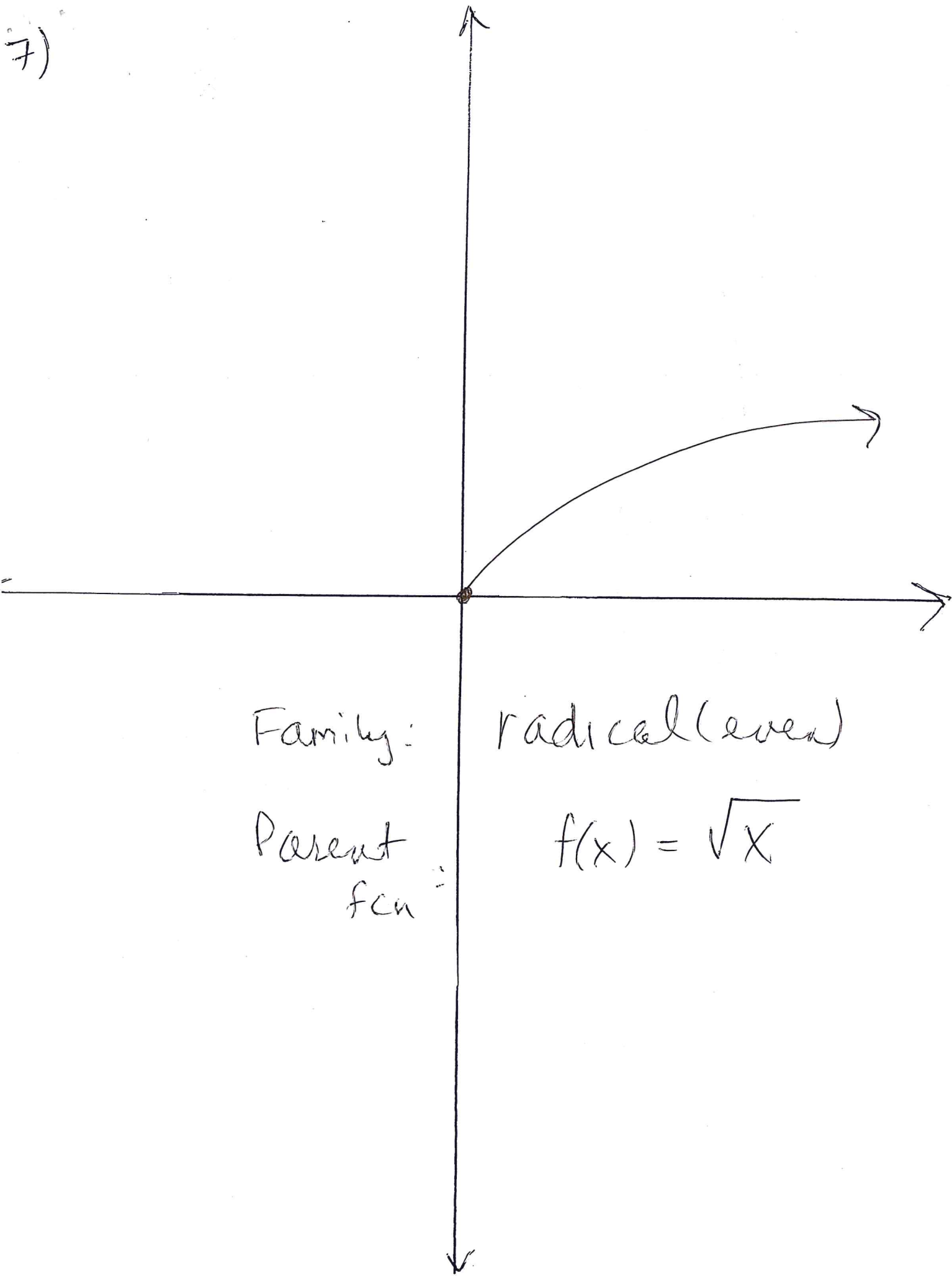
DECREASING: _____

CONSTANT: $(-5, -4) \cup (0, 1)$

CONSTANT: _____

7) USE WHITE PAPER ON ~~TABLE~~ ^{BACK OF LAST SHEET} TO
CREATE A GRAPH THAT SATISFIES THE
GIVEN CONDITIONS.

7)

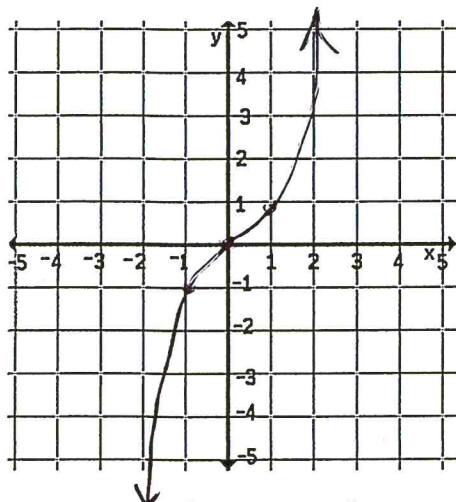


Family: radical (even)

Parent fcn: $f(x) = \sqrt{x}$

Function Families Review Answer Document

8A)

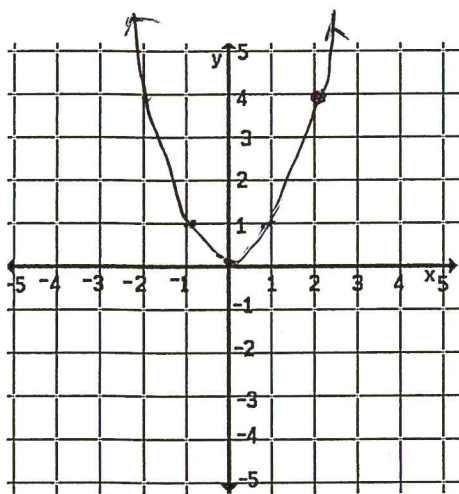


Equation: $f(x) = x^3$

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

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

8B)



Equation: $f(x) = x^2$

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

Range: $[0, \infty)$

