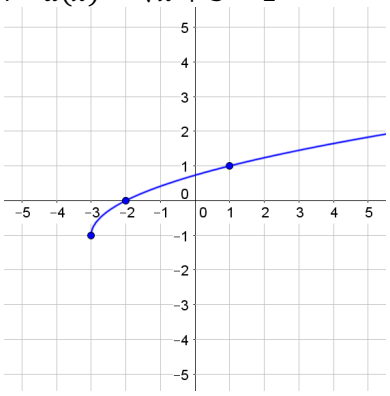
Name:_____

SM3 5.3 Graphing Radicals

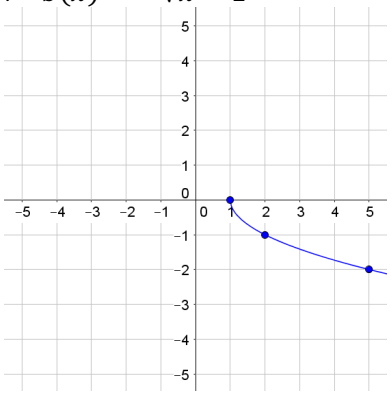
Sketch the radical function with at least 3 accurate points. State the domain and range of the function.

1) $a(x) = \sqrt{x+3} - 1$



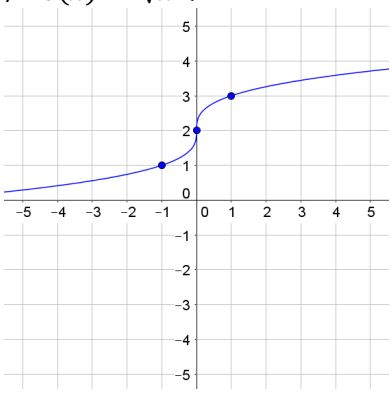
D: $[-3, \infty)$
R: $[-1, \infty)$

2) $b(x) = -\sqrt{x-1}$



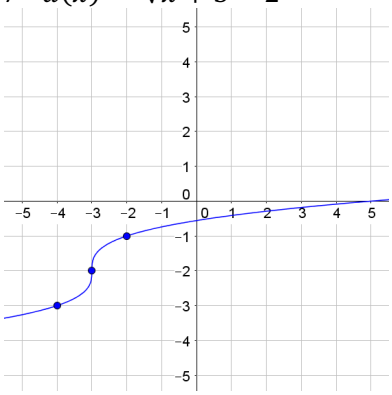
D: $[1, \infty)$
R: $(-\infty, 0]$

3) $c(x) = \sqrt[3]{x} + 2$



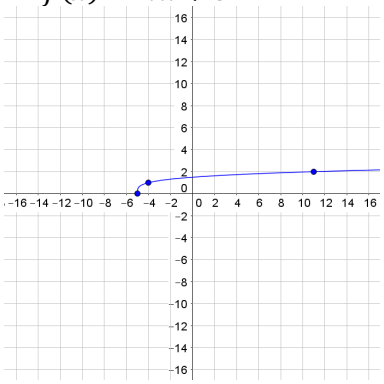
D: $(-\infty, \infty)$
R: $(-\infty, \infty)$

4) $d(x) = \sqrt[3]{x+3} - 2$



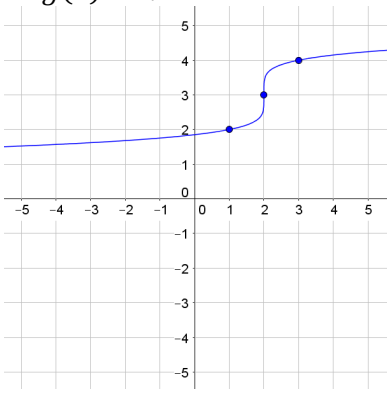
D: $(-\infty, \infty)$
R: $(-\infty, \infty)$

5) $f(x) = \sqrt[4]{x+5}$



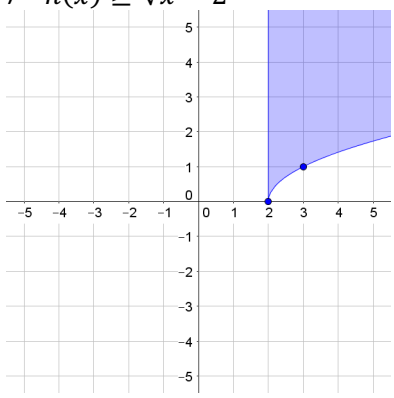
D: $[-5, \infty)$
R: $[0, \infty)$

6) $g(x) = \sqrt[5]{x-2} + 3$



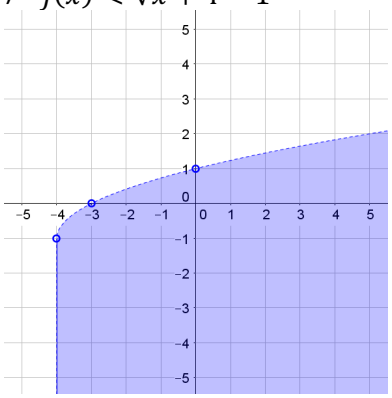
D: $(-\infty, \infty)$
R: $(-\infty, \infty)$

7) $h(x) \geq \sqrt{x-2}$



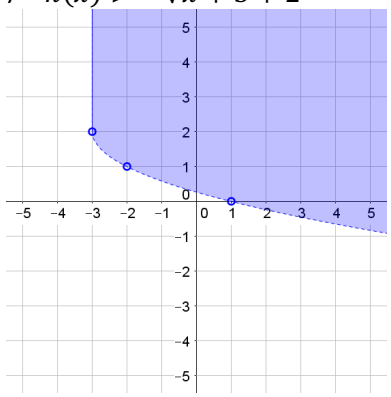
D: $[2, \infty)$
R: $[0, \infty)$

8) $j(x) < \sqrt{x+4} - 1$



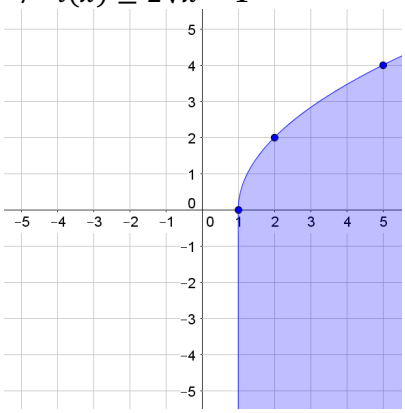
D: $[-4, \infty)$
R: $(-\infty, \infty)$

9) $k(x) > -\sqrt{x+3} + 2$



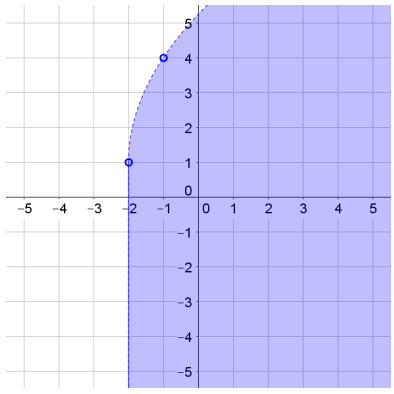
D: $[-3, \infty)$
R: $(-\infty, \infty)$

10) $l(x) \leq 2\sqrt{x-1}$



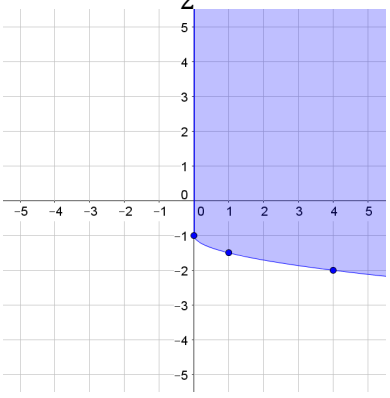
D: $[1, \infty)$
R: $(-\infty, \infty)$

11) $m(x) < 3\sqrt{x+2} + 1$



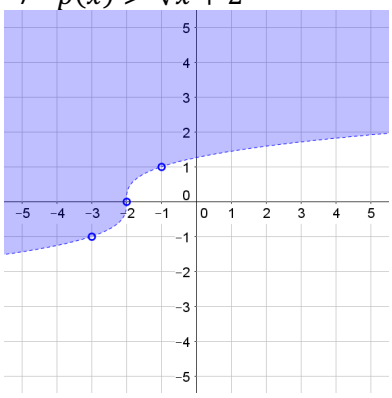
D: $[-2, \infty)$
R: $(-\infty, \infty)$

12) $n(x) \geq -\frac{1}{2}\sqrt{x} - 1$



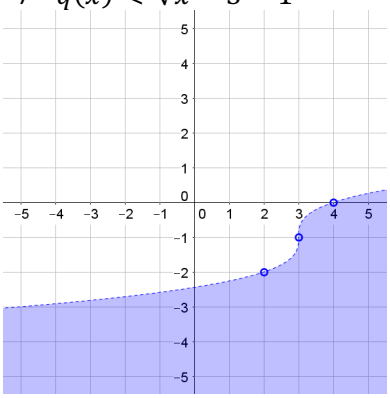
D: $[0, \infty)$
R: $(-\infty, \infty)$

13) $p(x) > \sqrt[3]{x+2}$



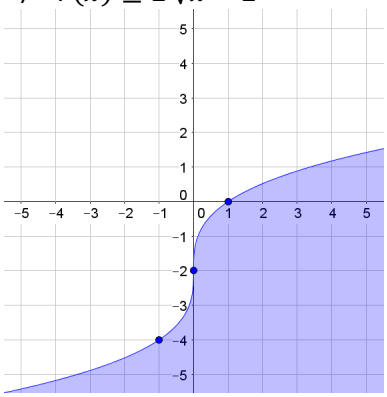
D: $(-\infty, \infty)$
R: $(-\infty, \infty)$

14) $q(x) < \sqrt[3]{x-3} - 1$



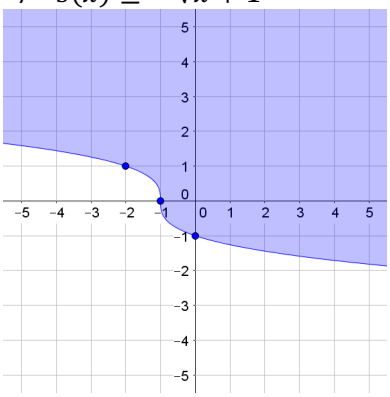
D: $(-\infty, \infty)$
R: $(-\infty, \infty)$

15) $r(x) \leq 2\sqrt[3]{x} - 2$



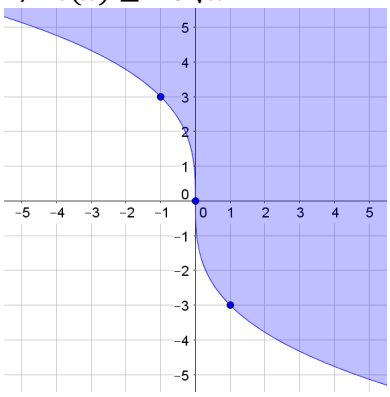
D: $(-\infty, \infty)$
R: $(-\infty, \infty)$

16) $s(x) \geq -\sqrt[3]{x+1}$



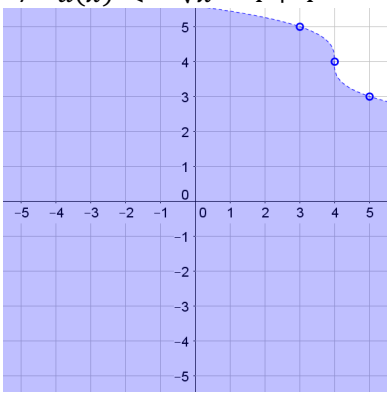
D: $(-\infty, \infty)$
R: $(-\infty, \infty)$

17) $t(x) \geq -3\sqrt[3]{x}$



D: $(-\infty, \infty)$
R: $(-\infty, \infty)$

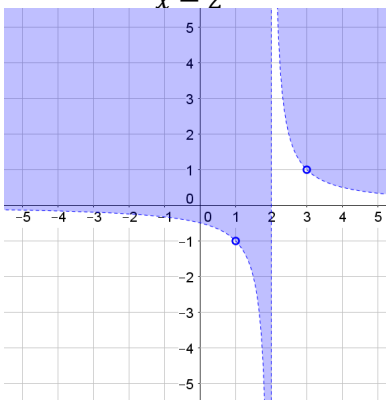
18) $u(x) < -\sqrt[3]{x-4} + 4$



D: $(-\infty, \infty)$
R: $(-\infty, \infty)$

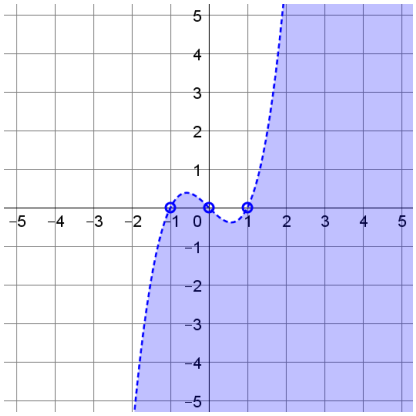
Cumulative Problems: Sketch the inequality. State the domain and range of the function.

19) $v(x) > \frac{1}{x-2}$



D: $(-\infty, 2), (2, \infty)$
R: $(-\infty, \infty)$

20) $w(x) < x^3 - x$



D: $(-\infty, \infty)$
R: $(-\infty, \infty)$