PreCal. Review Day 2

1. $f^{-1}(x) = \ln x$ 2. $f^{-1}(x) = \frac{1}{x} + 2$ 3. $f^{-1}(x) = \pm\sqrt{x-5}$

4. $f(g(x)) = \frac{1}{\sqrt{x+2}}$, D: $(-2, \infty)$ 5. $g(f(x)) = \sqrt{\frac{1}{x} + 2}$, D: $(-\infty, -\frac{1}{2}] \cup (0, \infty)$

6) 2 7) 1 8) $f \circ f(x) = x$ 9) $g \circ g(x) = \sqrt[3]{\sqrt[3]{x+1} + 1}$

10) (0,2) (2,6) (5,6) (6,8) (8,2) add 2 to y-values shift up 2

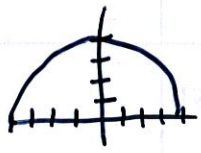
11) (0,0) (-2,8) (-5,8) (-6,12) (-8,0) change sign of x's, and mult. y's by 2 flip over y-axis stretch vertically twice as tall

12) (1,0) (3,4) (6,4) (7,6) (9,0) add 1 to x's, shift right 1

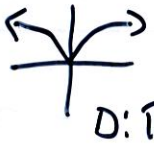
13) (0,-2) (2,-6) (5,-6) (6,-8) (8,-2) flip over x-axis, then shift down 2

14) 

D: $\mathbb{R}$ R: $[-2, \infty)$

15) 

D: $[-4, 4]$ R: $[0, 4]$

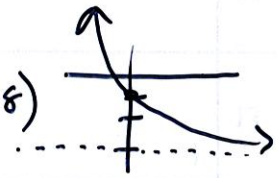
16) 

even symmetry

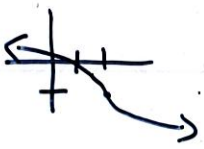
D: $\mathbb{R}$ R: $[0, \infty)$

17) 

D: $(3, \infty)$ R: $\mathbb{R}$

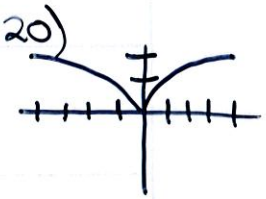
18) 

D: $\mathbb{R}$ R: $(-3, \infty)$

19) 

D: $\mathbb{R}$

R: $\mathbb{R}$

20) 

D: $[-4, 4]$ R: $[0, 2]$