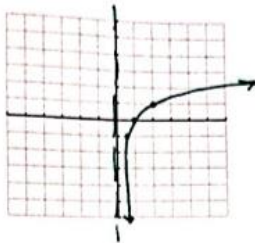
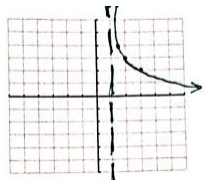
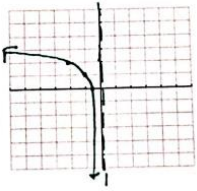
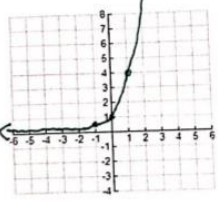
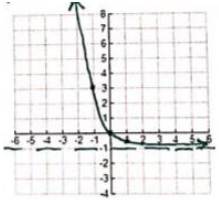


Secondary Math III

Assignment 9.4 (Review) Key

<p>1. a. $f^{-1}(x) = e^x$ b. $f^{-1}(x) = \ln x$ c. $f^{-1}(x) = 10^x$ d. $f^{-1}(x) = \log_2 x$</p> <p>2. a. flip over x-axis b. flip over y-axis c. down 1 d. right 1</p> <p>3. a. $x = 0$ b. $x = 1$ c. $x = -2$</p> <p>4 a. Z b. W c. Y d. X</p> <p>5. a. -1.127 b. 0.833 c. 1.041 d. 1.398</p>	<p>6. a.</p> <table style="display: inline-table; margin-right: 10px;"> <thead> <tr><th>X</th><th>Y</th></tr> </thead> <tbody> <tr><td>-1</td><td>1/2</td></tr> <tr><td>0</td><td>1</td></tr> <tr><td>1</td><td>2</td></tr> </tbody> </table> <table style="display: inline-table; margin-right: 10px;"> <thead> <tr><th>X</th><th>Y</th></tr> </thead> <tbody> <tr><td>1/2</td><td>-1</td></tr> <tr><td>1</td><td>0</td></tr> <tr><td>2</td><td>1</td></tr> </tbody> </table>  <p>Domain: $(0, \infty)$ Range: \mathbb{R} VA: $x = 0$</p> <p>b. Transformations: flip over x-axis, right 1, up 3</p>  <p>Domain: $(1, \infty)$ Range: \mathbb{R} VA: $x = 1$</p> <p>c. Transformations: flip over y-axis, up 1</p>  <p>Domain: $(-\infty, 0)$ Range: \mathbb{R} VA: $x = 0$</p>	X	Y	-1	1/2	0	1	1	2	X	Y	1/2	-1	1	0	2	1
X	Y																
-1	1/2																
0	1																
1	2																
X	Y																
1/2	-1																
1	0																
2	1																
<p>7. a. $\log_2 8 = 3$ b. $\log_e 1 = 0$ c. $\log_{\frac{1}{4}} 16 = -2$ d. $\log_6 \frac{1}{6} = -1$ e. $\log_{\frac{1}{4}} 64 = -3$ d. $\log_{125} 5 = \frac{1}{3}$</p> <p>8. a. $x > -2$ b. \mathbb{R} c. $x < \frac{3}{2}$ d. $x > 0$ e. $x < 0$ f. $x > 0$</p> <p>9. a. $25^{\frac{1}{2}} = 5$ b. $10^2 = 100$ c. $4^{-1} = \frac{1}{4}$ d. $\frac{1}{3^{-4}} = 81$ e. $e^0 = 1$ f. $10^{-2} = \frac{1}{100}$</p>	<p>10. a. -3 b. 3 c. 2 d. -1 e. 1 f. 1 g. $\frac{1}{2}$ h. 2</p> <p>11. a.</p> <table style="display: inline-table; margin-right: 10px;"> <thead> <tr><th>X</th><th>Y</th></tr> </thead> <tbody> <tr><td>-1</td><td>1/4</td></tr> <tr><td>0</td><td>1</td></tr> <tr><td>1</td><td>4</td></tr> <tr><td>2</td><td>16</td></tr> </tbody> </table>  <p>Domain: \mathbb{R} Range: $(0, \infty)$ y-int.: $(0,1)$ HA: $y = 0$ Exp. Growth</p> <p>b. Transformations: flip over y-axis, down 1</p>  <p>Domain: \mathbb{R} Range: $(-1, \infty)$ y-int.: $(0,0)$ HA: $y = -1$ Exp. Decay</p>	X	Y	-1	1/4	0	1	1	4	2	16						
X	Y																
-1	1/4																
0	1																
1	4																
2	16																

c. Transformations: flip over x-axis, right 1, up 2

Domain: \mathbb{R}

Range: $(-\infty, 2)$

y-int.: $(0, 1.5)$

HA: $y = 2$

Exp. Neither

