

Transformations of Inverse Graphs

Name: _____

Sketch a graph (in radians) of each inverse function. Begin by drawing the parent function and then transform the critical points.

1. $y = \frac{\pi}{4} + 2\arctan 3(x+7)$

2. $y = \frac{\pi}{6} + 2\arcsin(x+1)$

3. $y = 3 + \frac{4}{\pi}\arccos\frac{1}{5}(x+2)$

4. $y = 2 - \frac{7}{\pi}\arcsin 5(x-3)$

5. $y = 2\pi + 4\arcsin 3(x)$

6. $y = 4\arccos\frac{1}{2}(x-1)$

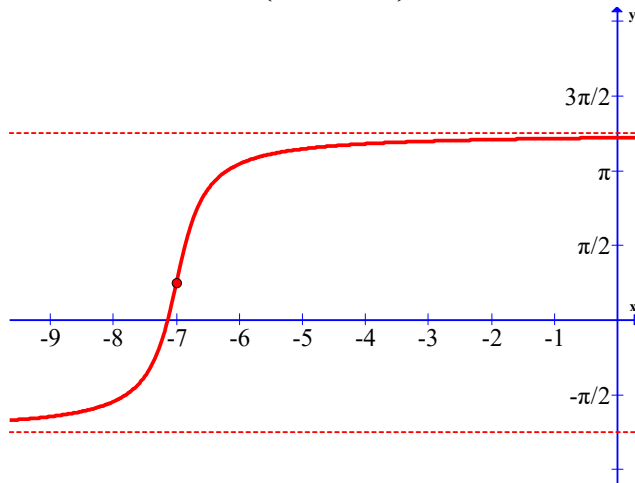
7. $y = \frac{\pi}{2} + \frac{1}{2}\arccos 2(x-3)$

8. $y = -\pi + 2\arcsin\frac{1}{4}(x+2)$

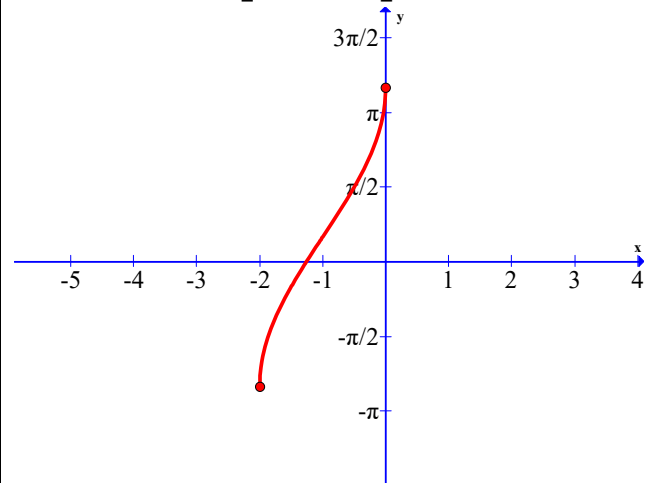
9. $y = 2 + \frac{4}{\pi}\arctan 5(x-3)$

10. $y = 5 - \frac{10}{\pi}\arctan(x-2)$

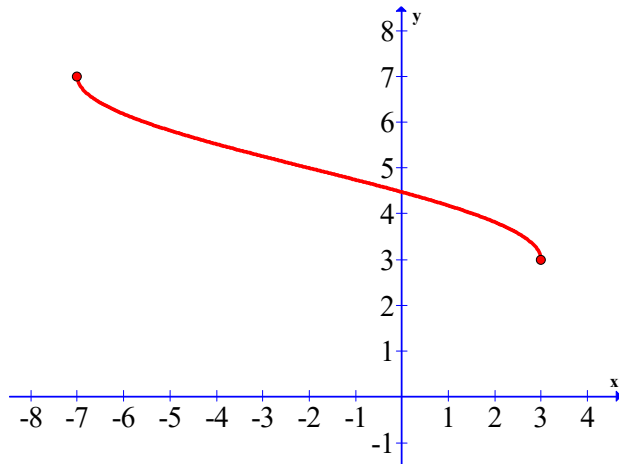
1. $D: (-\infty, \infty)$ $R: \left(-\frac{3\pi}{4}, \frac{5\pi}{4}\right)$



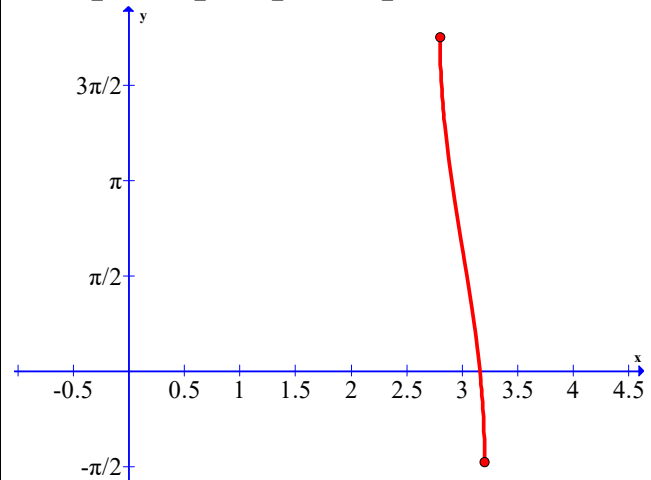
2. $D: [-2, 0]$ $R: \left[-\frac{5\pi}{6}, \frac{7\pi}{6}\right]$



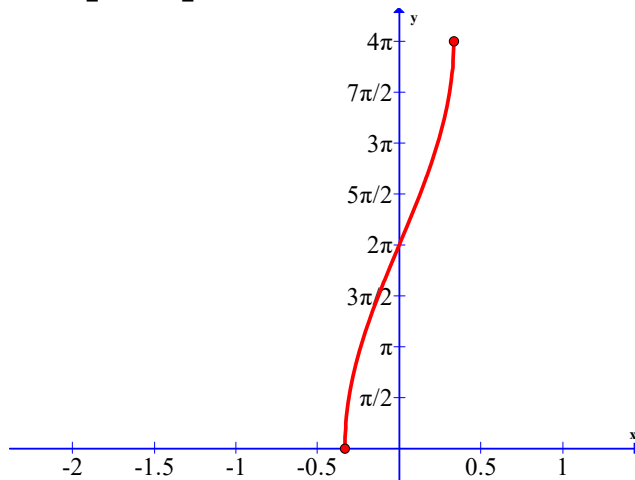
3. $D: [-7, 3]$ $R: [3, 7]$



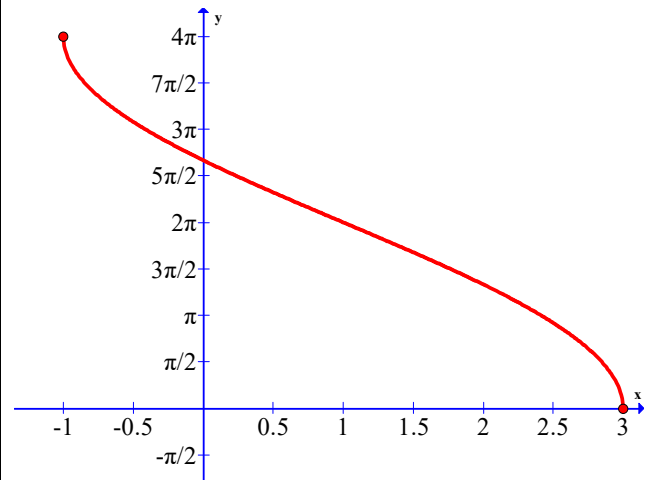
4. $D: \left[\frac{14}{5}, \frac{16}{5}\right]$ $R: \left[-\frac{3}{2}, \frac{11}{2}\right]$



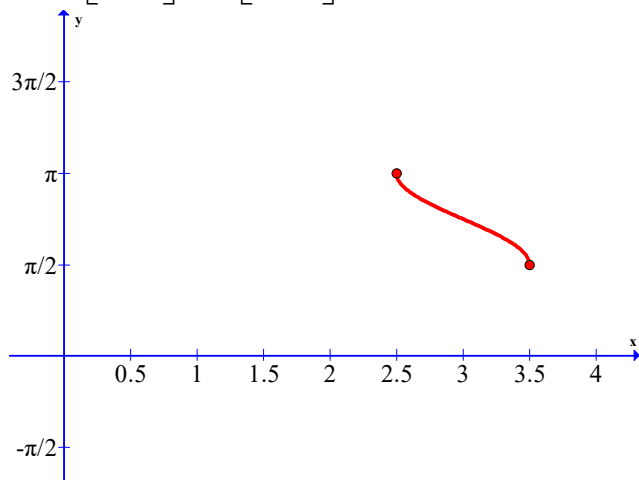
5. $D: \left[-\frac{1}{3}, \frac{1}{3}\right]$ $R: [0, 4\pi]$



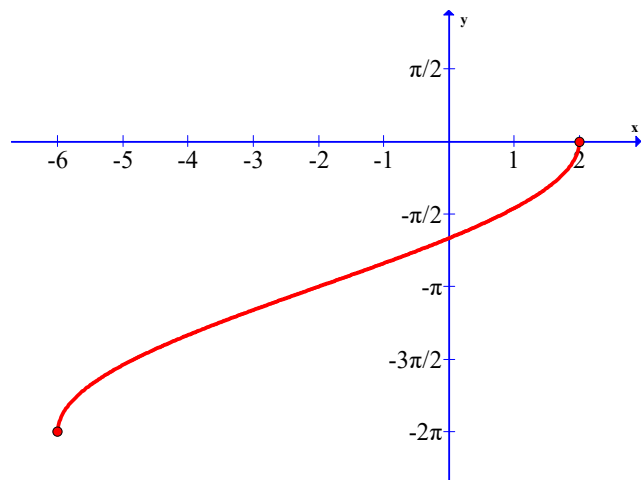
6. $D: [-1, 3]$ $R: [0, 4\pi]$



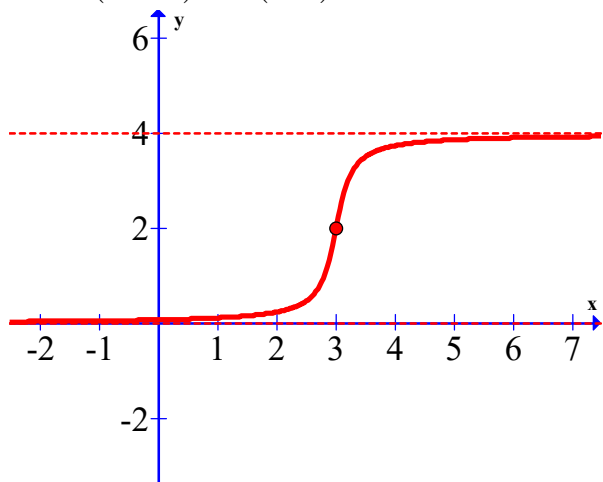
7. D: $\left[\frac{5}{2}, \frac{7}{2}\right]$ R: $\left[\frac{\pi}{2}, \pi\right]$



8. D: $[-6, 2]$ R: $[-2\pi, 0]$



9. D: $(-\infty, \infty)$ R: $(0, 4)$



10. D: $(-\infty, \infty)$ R: $(-1, 11)$

