AP Calculus Summer Homework Part 1

Sketch the graph and fill in the table of facts relating to each function (graph). You may use a calculator to refresh your memory. However, it is our long term goal to know these graphs from memory. We need to be able to draw them and to recognize drawings of them when they are presented.

These 27 graphs will be collected and graded. The assignment will be worth 25 points.

Part 2 of the Summer Homework assignment will not be collected. Instead, we will take a ***test*** over that assignment on the during the first week of the school year. To create the test, I will use a random number generator to select 25 of the questions from the assignment. The test will be worth 50 points. As it is a test and not a quiz, it cannot be dropped at the end of the semester.

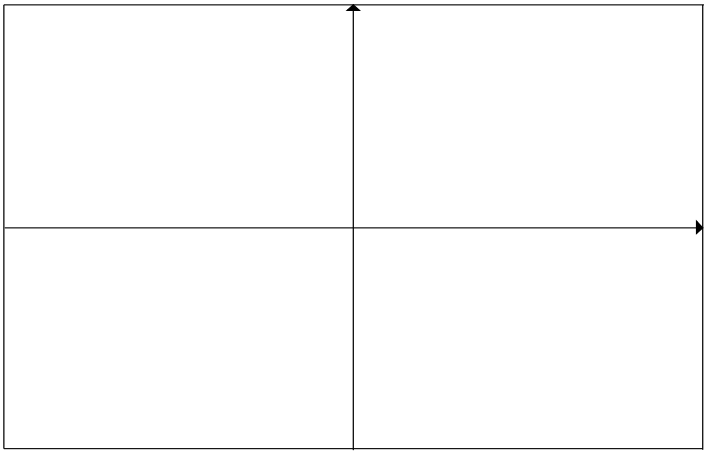
www. Random.org

AP Calculus
27 Graphs

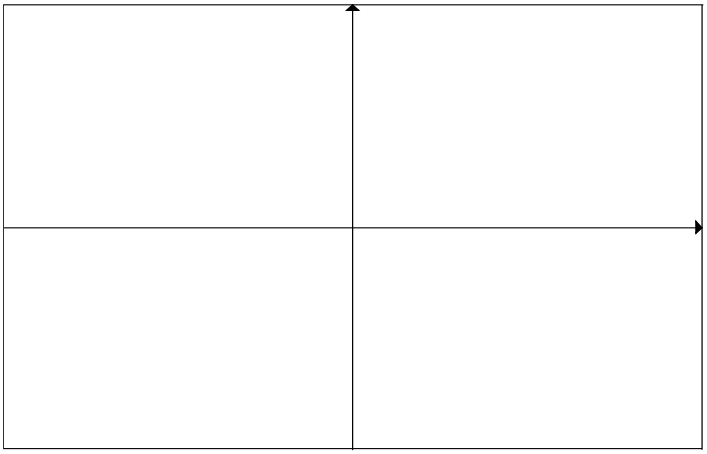
Name_____

Score _____

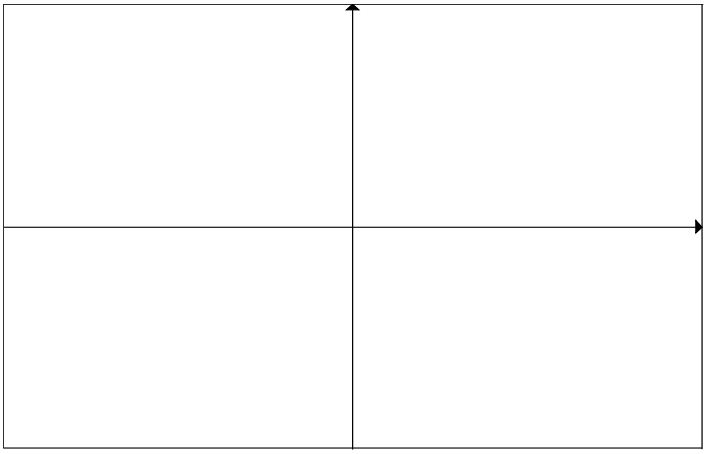
1. $f(x) = x$	
Domain	
Range	
Y-Intercept	
Root(s)	
Symmetry	
End Behavior Type	



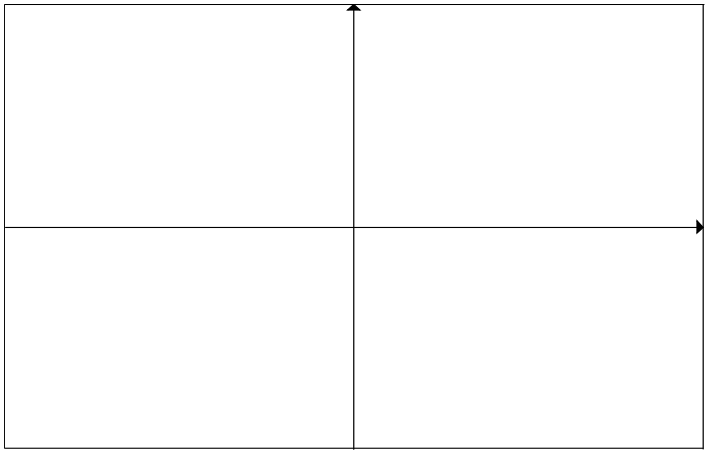
2. $f(x) = c$	
Domain	
Range	
Y-Intercept	
Root(s)	
Symmetry	
End Behavior Type	



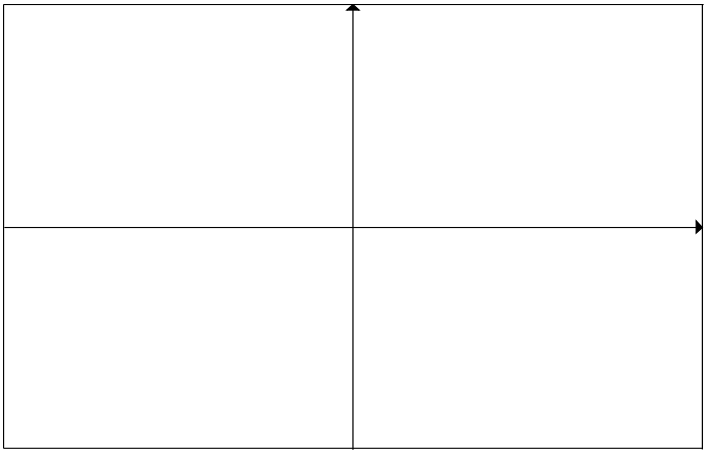
3. $f(x) = mx + b$	
Domain	
Range	
Y-Intercept	
Root(s)	
Symmetry	
End Behavior Type	



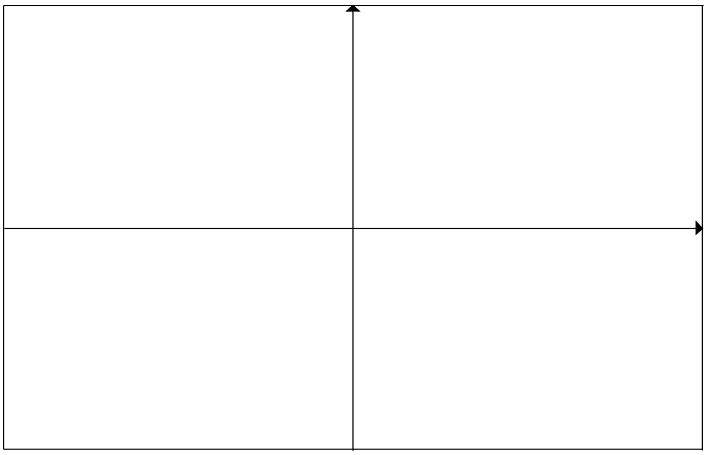
4. $x = c$ Not A Function	
Domain	
Range	
Y-Intercept	
Root(s)	
Symmetry	



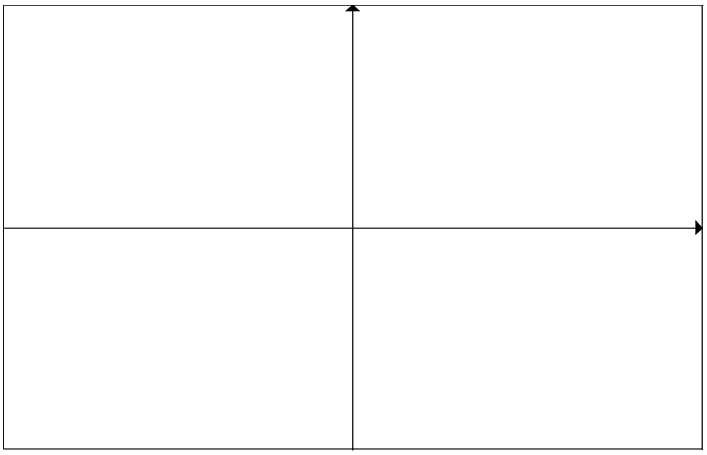
5. $f(x) = \lvert x \rvert$	
Domain	
Range	
Y-Intercept	
Root(s)	
Minimum	
Symmetry	
End Behavior Type	



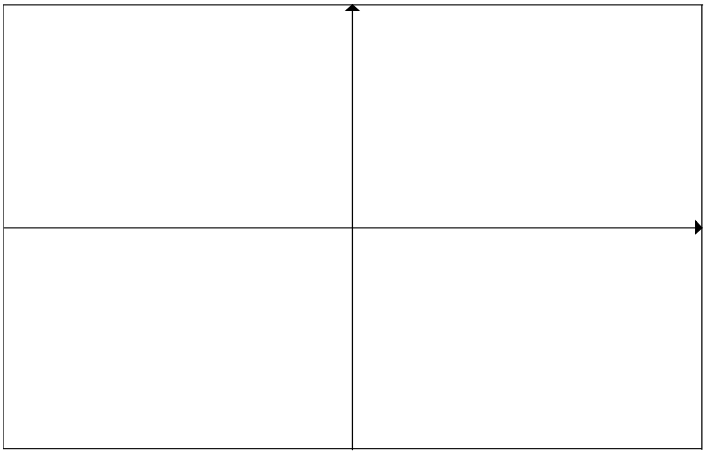
6. $f(x) = x^n$ *n is even*	
Domain	
Range	
Y-Intercept	
Root(s)	
Minimum	
Symmetry	
End Behavior Type	



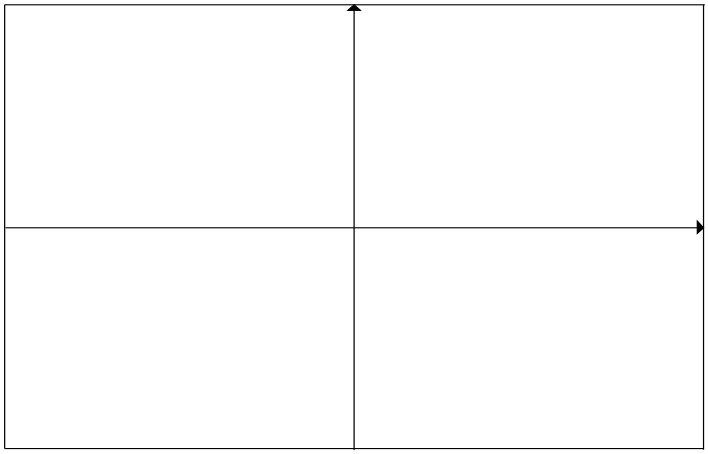
7. $f(x) = x^n$ n *is* odd	
Domain	
Range	
Y-Intercept	
Root(s)	
Symmetry	
End Behavior Type	



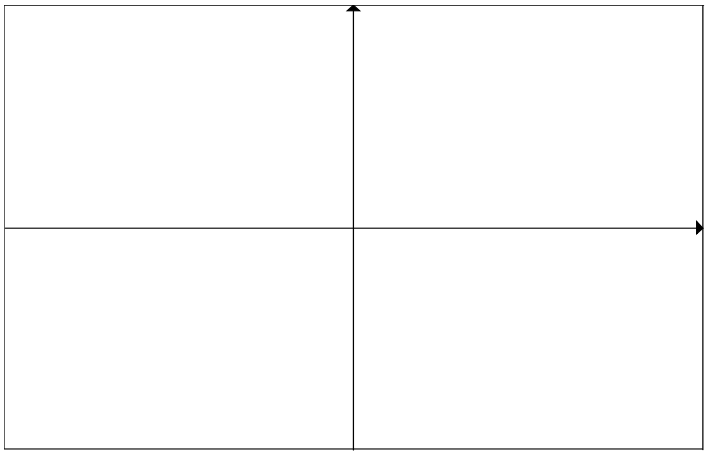
8. $f(x) = \frac{1}{x^n}$ n *is even*	
Domain	
Range	
Y-Intercept	
Root(s)	
Symmetry	
End Behavior Type	
Horizontal Asymptote(s)	
Vertical Asymptote(s)	



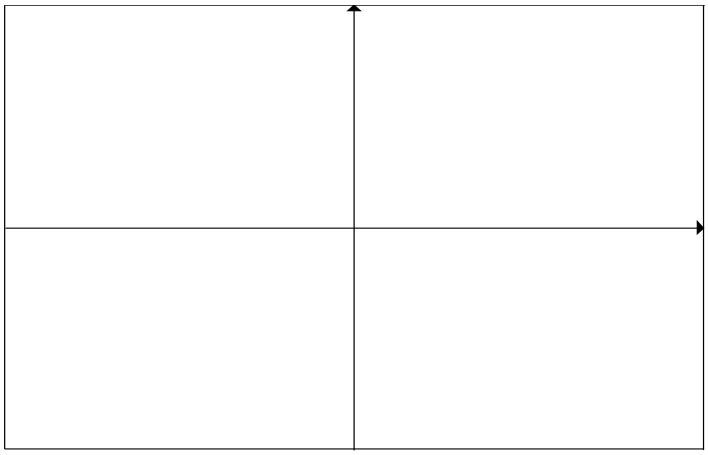
9. $f(x) = \frac{1}{x^n}$ n *is* odd.	
Domain	
Range	
Y-Intercept	
Root(s)	
Symmetry	
End Behavior Type	
Horizontal Asymptote(s)	
Vertical Asymptote(s)	



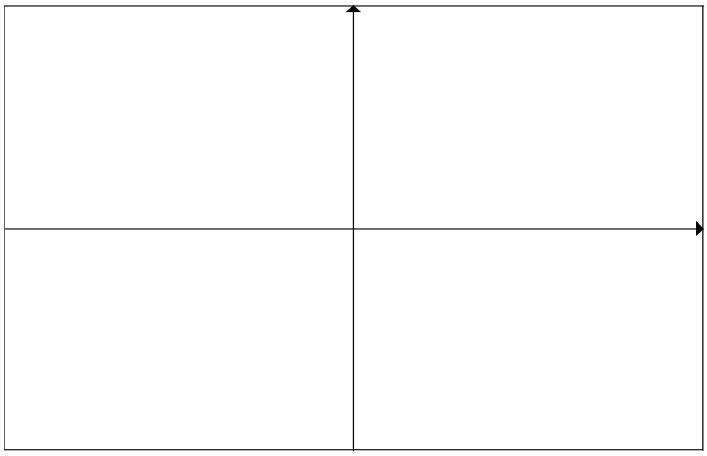
10. $f(x)=\sqrt[n]{x}$ *n is even*	
Domain	
Range	
Y-Intercept	
Root(s)	
Symmetry	
End Behavior Type	



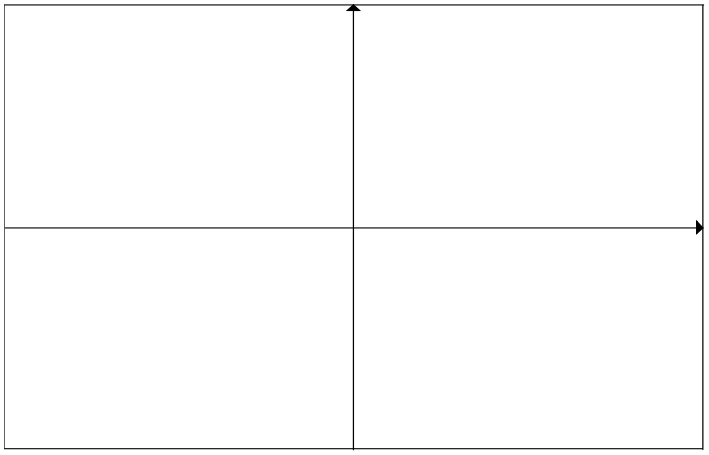
11. $f(x)=\sqrt[n]{x}$ *n is* odd	
Domain	
Range	
Y-Intercept	
Root(s)	
Symmetry	
End Behavior Type	



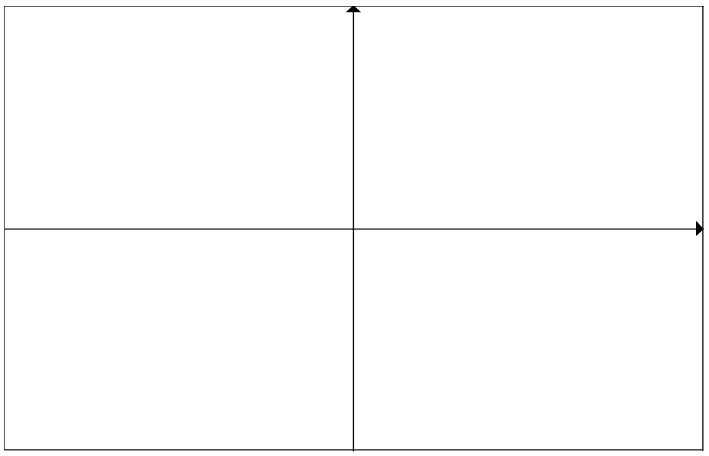
12. $f(x)=a^x \quad a>1$	
Domain	
Range	
Y-Intercept	
Root(s)	
Symmetry	
End Behavior Type	
Horizontal Asymptote	
$f(1)=$	



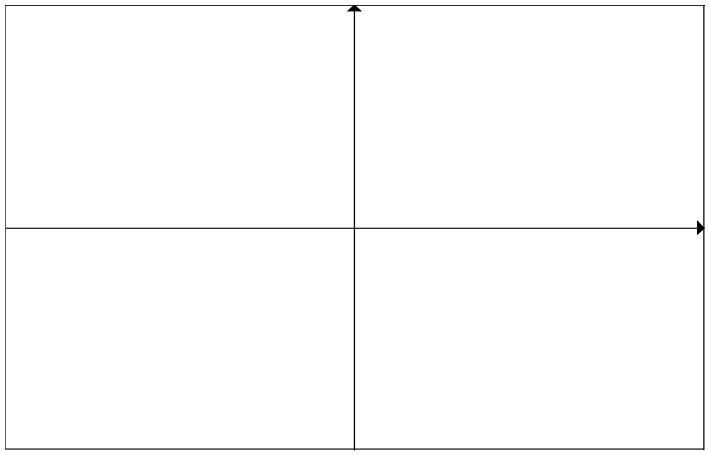
13. $f(x) = a^x \quad 0 < a < 1$	
Domain	
Range	
Y-Intercept	
Root(s)	
Symmetry	
End Behavior Type	
Horizontal Asymptote	
$f(1) =$	



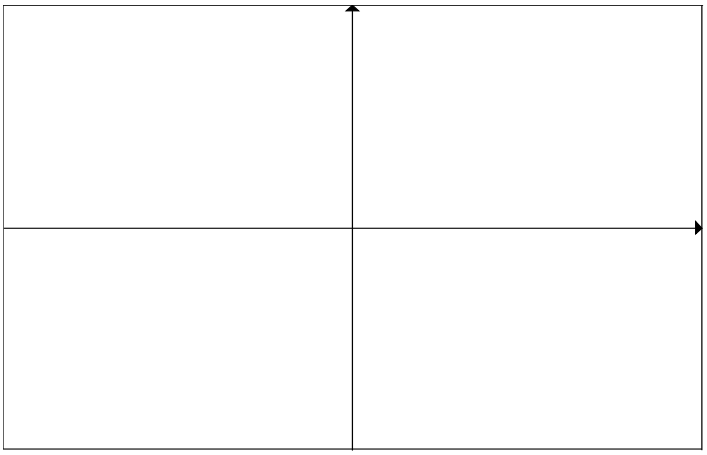
14. $f(x) = e^x$	
Domain	
Range	
Y-Intercept	
Root(s)	
Symmetry	
End Behavior Type	
Horizontal Asymptote	
$f(1) =$	



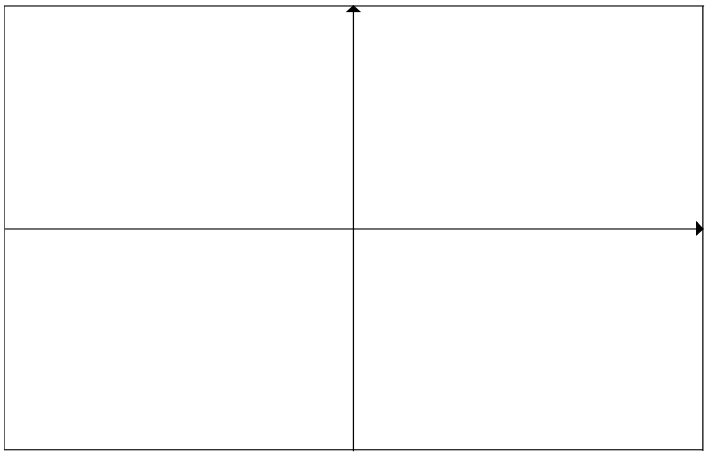
15. $f(x) = \log_B(x) \quad B > 1$	
Domain	
Range	
Y-Intercept	
Root(s)	
Symmetry	
End Behavior Type	
Vertical Asymptote(s)	
$f(1) =$	
$f(\mathrm{B}) =$	



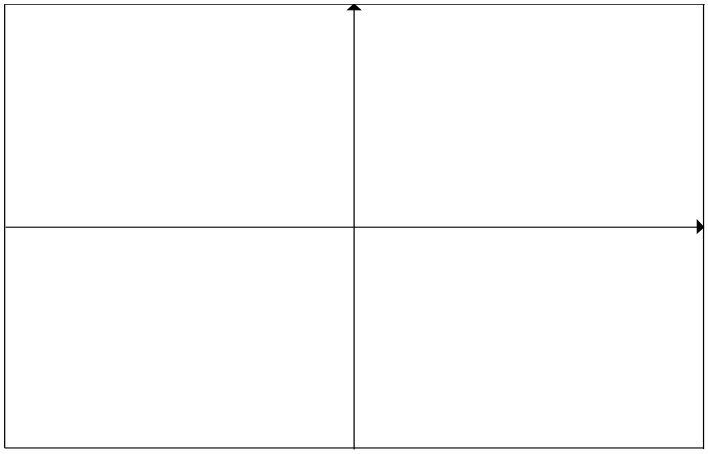
16. $f(x)=\ln(x)$	
Domain	
Range	
Y-Intercept	
Root(s)	
Symmetry	
End Behavior Type	
Vertical Asymptote(s)	
$f(1)=$	
$f(\mathrm{e})=$	

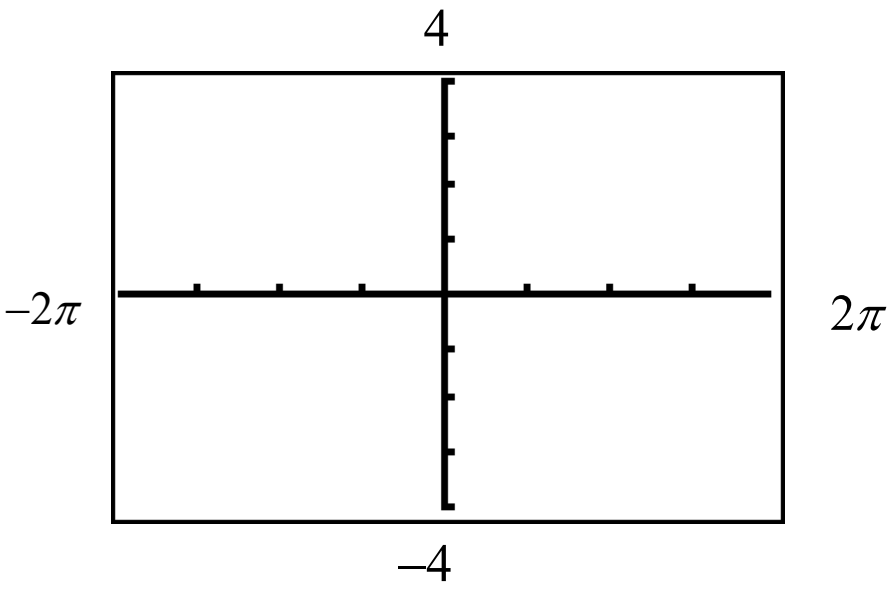


17. $(x-h)^2+(y-k)^2=r^2$ Not a Function	
Domain	
Range	
Y-Intercept(s)	
Root(s)	
Symmetry	
Center	

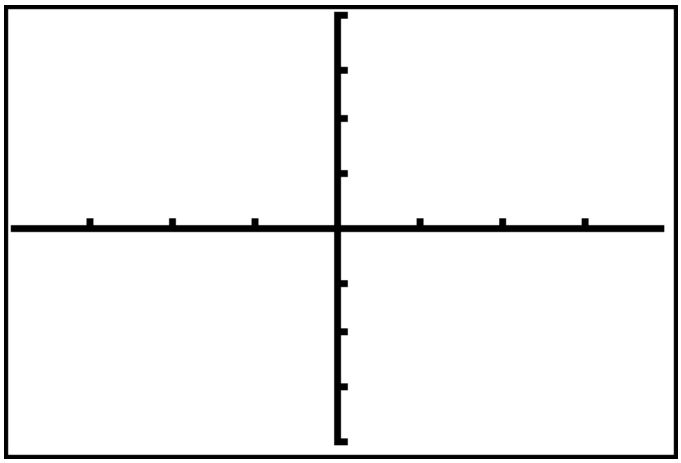


18. $f(x)=\sqrt{a^2-x^2}$	
Domain	
Range	
Y-Intercept(s)	
Root(s)	
Symmetry	
$f(\mathrm{a})=$	
$f(-\mathrm{a})=$	

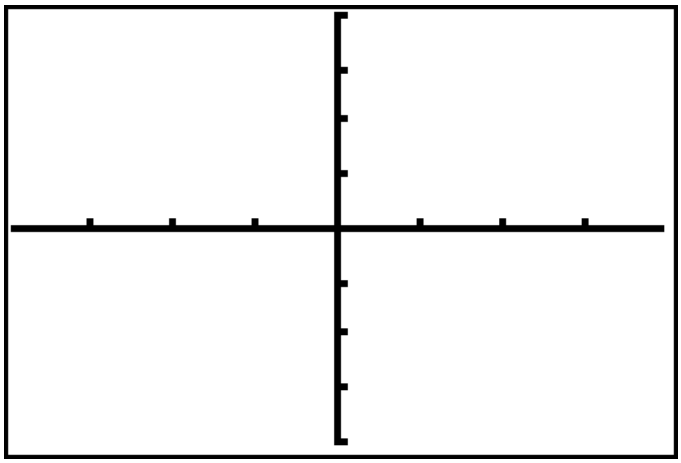




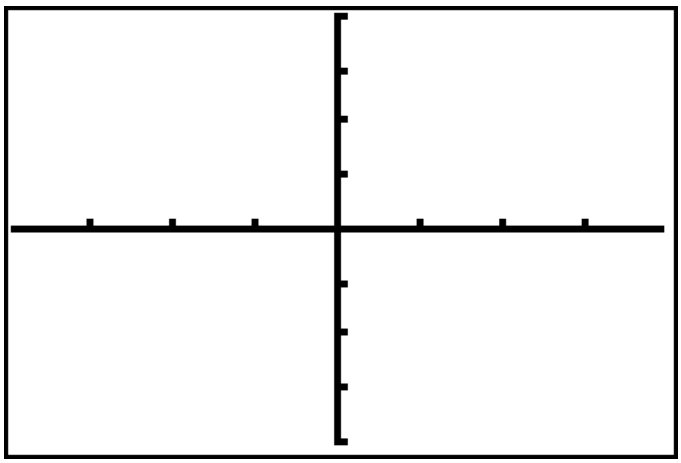
$f(x)=\sin(x)$	
Domain	
Range	
Amplitude	
Period	
Vertical Asymptotes	
Symmetry	
Roots	



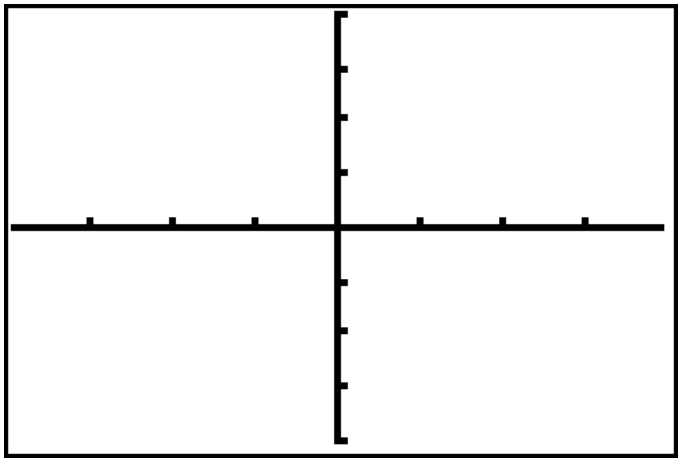
$f(x)=\csc(x)$	
Domain	
Range	
Amplitude	
Period	
Vertical Asymptotes	
Symmetry	
Roots	



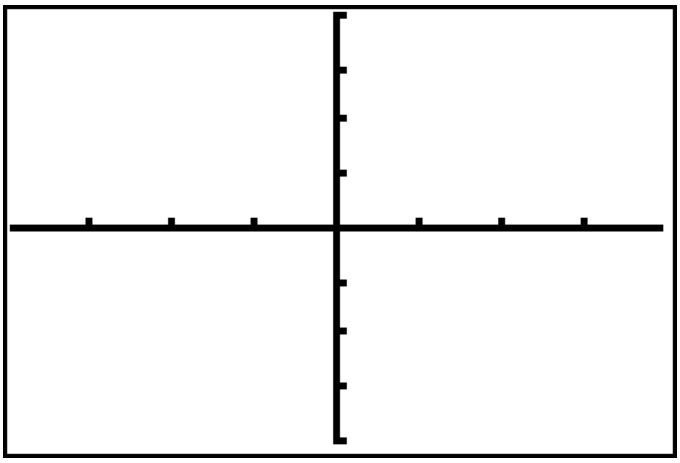
$f(x)=\cot(x)$	
Domain	
Range	
Amplitude	
Period	
Vertical Asymptotes	
Symmetry	
Roots	



$f(x)=\cos(x)$	
Domain	
Range	
Amplitude	
Period	
Vertical Asymptotes	
Symmetry	
Roots	

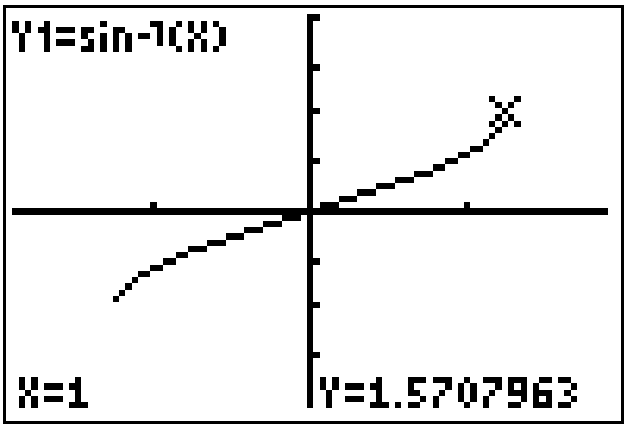


$f(x)=\sec(x)$	
Domain	
Range	
Amplitude	
Period	
Vertical Asymptotes	
Symmetry	
Roots	

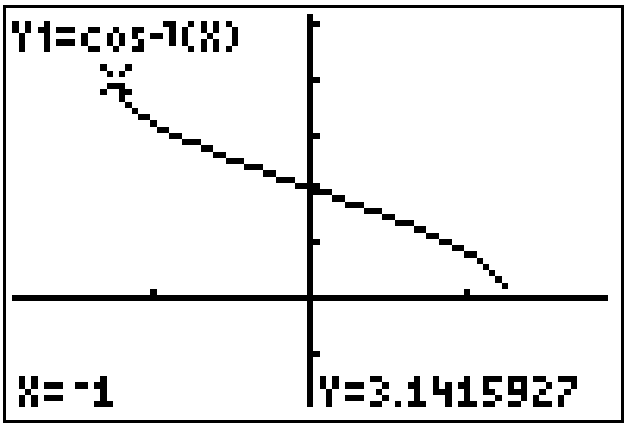


$f(x)=\tan(x)$	
Domain	
Range	
Amplitude	
Period	
Vertical Asymptotes	
Symmetry	
Roots	

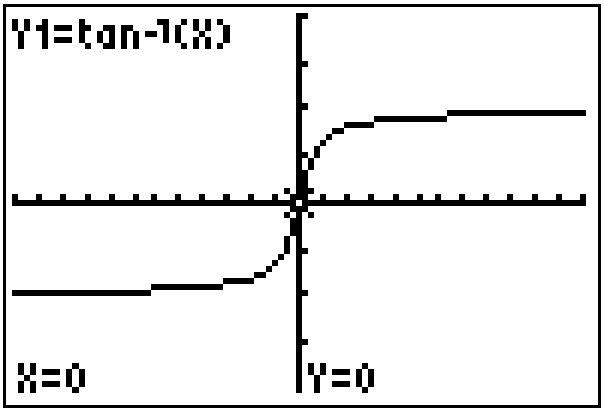
List the domain and range of each invers trigonometric function. Then list the three key points on each graph.



$f(x)=\sin^{-1}(x)$	
Domain	
Range	
Point 1	
Point 2	
Point 3	



$f(x)=\cos^{-1}(x)$	
Domain	
Range	
Point 1	
Point 2	
Point 3	



$f(x)=\tan^{-1}(x)$	
Domain	
Range	
Point 1	
Point 2	
Point 3	