

Calc 1.2 Notes- Functions and Graphs

Function-

1. Express the area of a square as a function of side length.
2. Express the volume of a sphere as a function of radius? Diameter?

Domain-

Range-

Finding Domain:

- Domain restrictions: (RS #22)
 - 1.
 - 2.
 - 3.
- Graphically

Finding Range:

-

Find the domain and range of each function.

3. $y = x^2$

4. $f(x) = \frac{1}{x+5}$

5. $y = \sqrt{4-x^2}$

6. $g(x) = \sqrt{9-x^2}$

7. $y = \frac{1}{\sqrt{1-x^2}}$

Even Function:

Odd Function:

Determine whether the function is even or odd. State any symmetry. Verify your answer in your calculator.

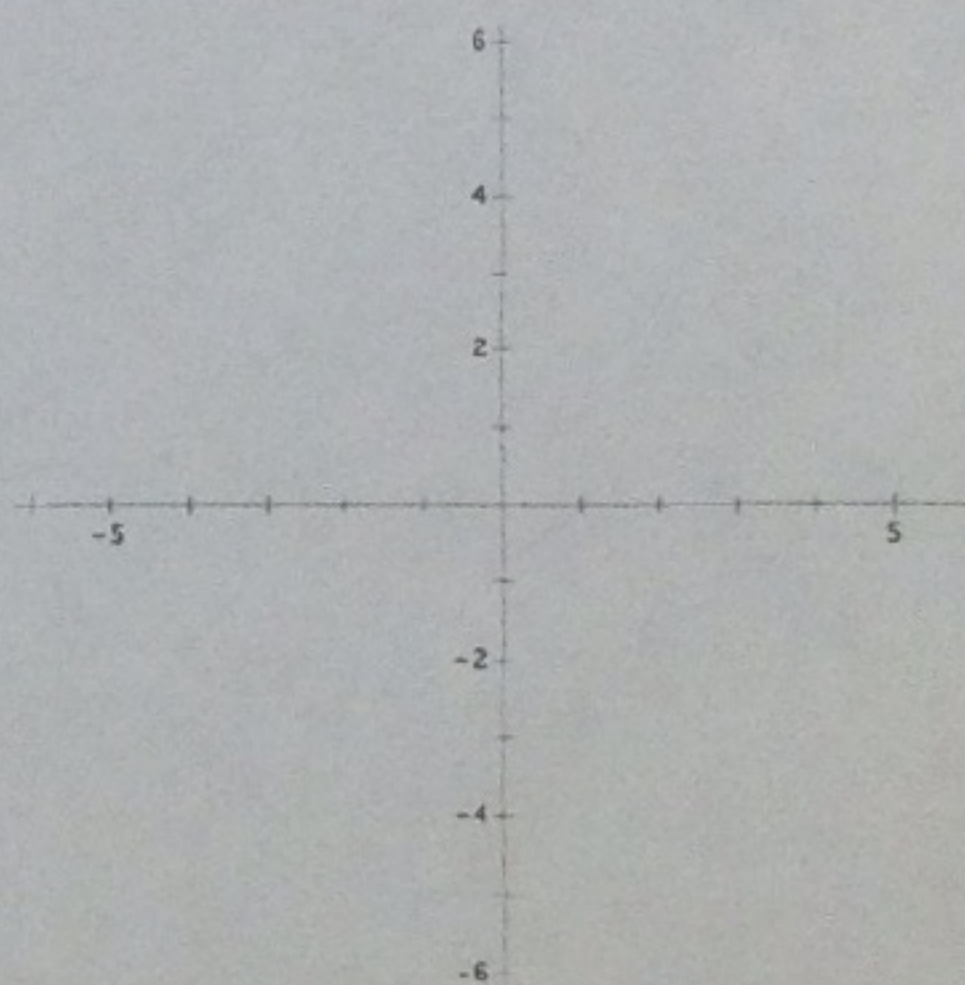
8. $f(x) = x^2 - 3$

9. $y = x^3 + 6$

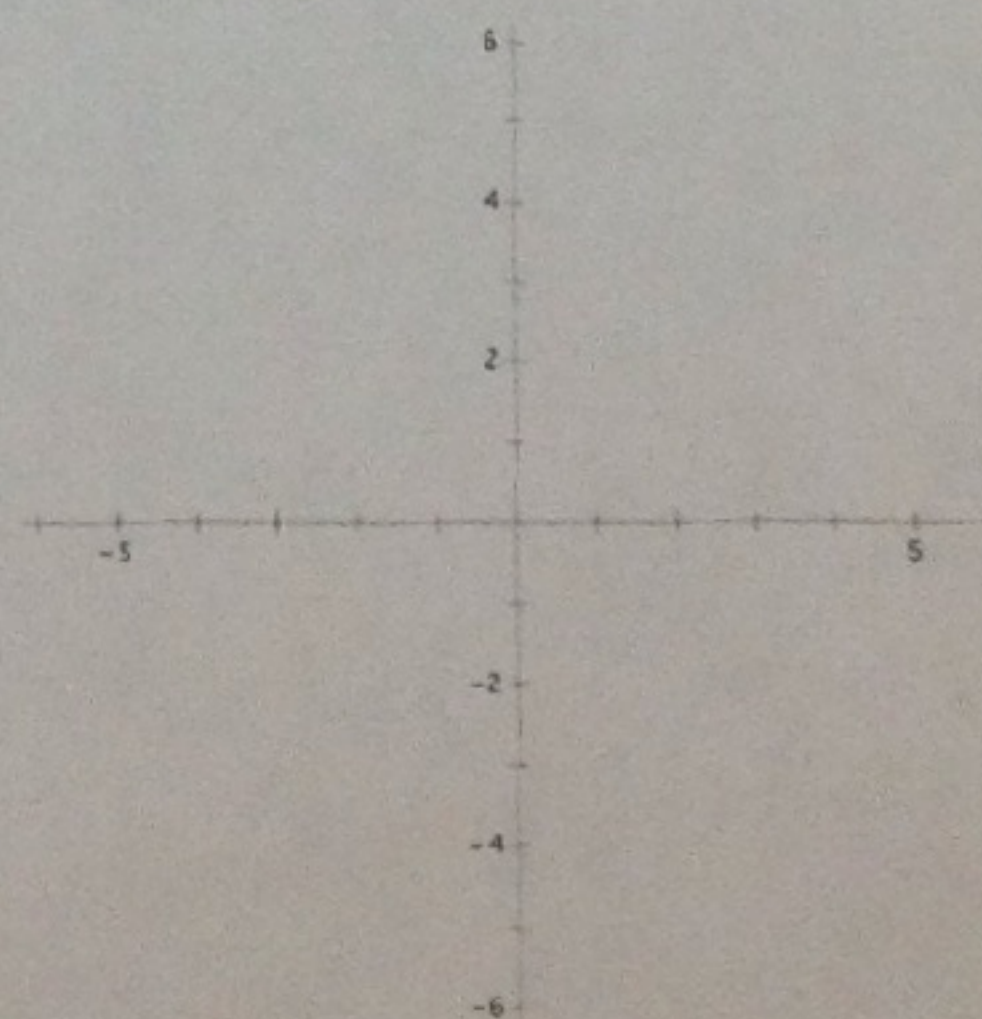
10. $g(x) = 4x - x^3$

Graph the following piecewise function.

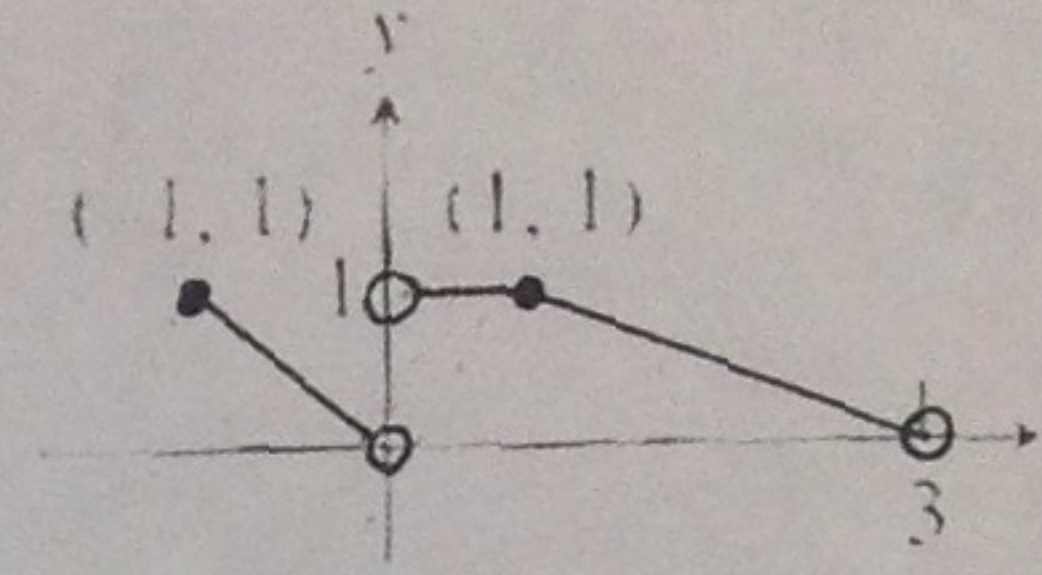
11. $f(x) = \begin{cases} x + 3, & x > 0 \\ x^2, & 0 \leq x < 2 \\ 4x, & x \geq 2 \end{cases}$



12. $g(x) = \begin{cases} 4 - x^2, & x < 1 \\ \frac{3}{2}x + \frac{3}{2}, & 1 \leq x \leq 3 \\ x + 3, & x > 3 \end{cases}$



13. Write piecewise formula for the following graph:



{14 - 16} Use $f(x) = x^2 + x + 1$ and $g(x) = x - 2$ to find the following.

14. $(f \circ g)(x)$

15. $f(g(1))$

16. $g(f(1))$

Assign 1B

P. 19-21 1, 3, 5, 7, 15, 19, 21, 22, 29, 31, 34, 37, 39, 41, 42, 49, 53, 60, 62.

QR P. 26 1, 4, 6, 7, 10.