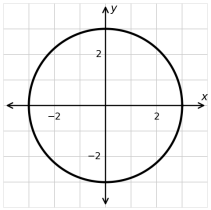
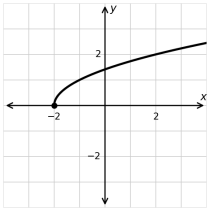
Self-Test

Work each problem in the space provided without your notes. Then check the answers box.

1. Use the Vertical Line Test. Is each graph a function?





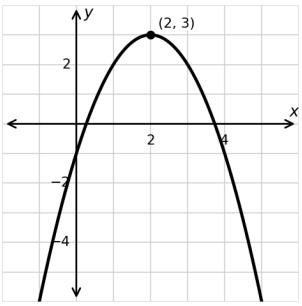
(a) Yes / No ***(b) Yes / No***

2. Determine the zeros algebraically: $f(x) = 2x^2 + x - 15$ and graphically.

3. Determine the zeros algebraically $f(x) = \dfrac{x^2 - 16}{x + 4}$ and graphically.

Zeros: _____

4. Use the graph of g.



Domain:

Range:

Increasing:

Decreasing:

Rel. max / min:

f(3) = _____

5. f is a linear function with f(−2) = 11 and f(4) = −1. Find the rate of change (slope) of f.

m = _____

6. Find the average rate of change of $f(x) = x^3 - 2x$ from $x_1 = -1$ to $x_2 = 2$.

A.R.o.C. = _____

7. $f(x) = x^5 - 4x^3$ (Must show justification)

f(−x) =

Circle: Even Odd Neither

8. $f(x) = 2x^4 + x^2 - 7$. (Must show justification)

f(−x) =

Circle: Even Odd Neither

9. $f(x) = x^3 + 1$. (Must show justification)

f(−x) =

Circle: Even Odd Neither

10. Review: $f(x) = x^2 + 5$ determine the difference quotient: $\dfrac{f(x+h) - f(x)}{h}$