

Name: _____

Date: _____

Instructions: Please complete the following problems.

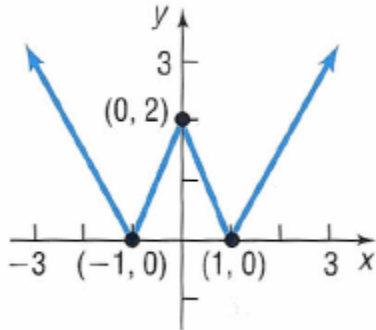
Problem 1. Given the function $f(x) = 2x^2$, using interval notation describe where the function is increasing and decreasing?

Problem 2. Determine if the function $f(x) = x^3 + x^2$ is odd, even, or neither

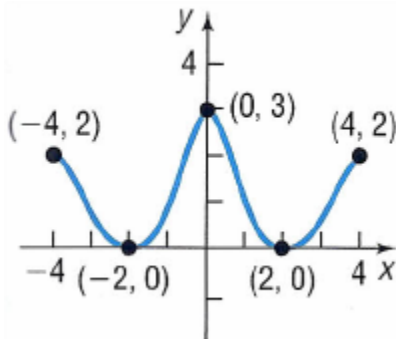
Problem 3. True or False: At a point on a graph where a function changes directions from increasing to decreasing, the function has a relative minimum.

Problem 4. Is a circle a function, why or why not?

Problem 5. Find the minimum points of:



Problem 6. Describe where the function is decreasing:



Problem 7. Given the following piecewise function, find $f(0)$

$$f(x) = \begin{cases} 2x + 3 & x \leq 0 \\ -5x + 4 & x > 0 \end{cases}$$

Problem 8. Given $f(x) = x^2 + 3x$, find $f(x + 3)$

Problem 9. Draw a linear function of your choice.

Problem 10. Draw x^2

Problem 11. Draw x^3

Problem 12. Draw $|x|$

Problem 13. Draw \sqrt{x}

Problem 14. Draw $x^{1/3}$