

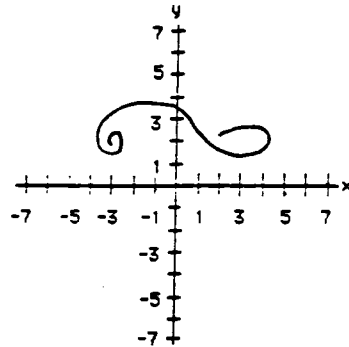
Mth 112 Ch. 8 Practice Test

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Consider the relation $\{(-3,9), (-1,1), (3,9)\}$.

1. Is the relation a function?
2. Find the domain of the relation.
3. Find the range of the relation.

4. Does the graph to the right represent a function?



5. Find the domain of $f(x) = \sqrt{4-x}$.
6. Is $f(x) = \sqrt{4-x}$ a one-to-one function?
7. Evaluate $f(-3)$ for the function $f(x) = x^4 - x^3$.

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Let $f(x) = x^2 - 2x$ and $g(x) = x^3 + 5$.

8. Evaluate $f[g(-2)]$.

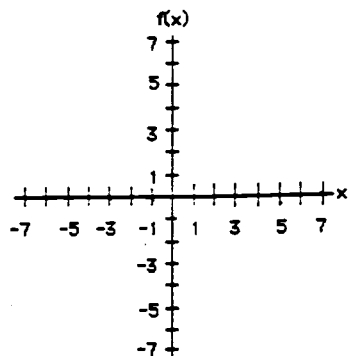
9. Evaluate $g[f(-2)]$.

10. Find the polynomial that equals $f[g(x)]$.

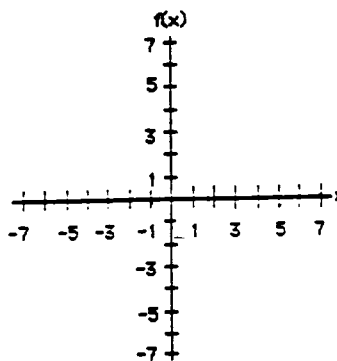
11. Find the polynomial that equals $g[f(x)]$.

Graph the following functions.

12. $f(x) = \sqrt{4 - x^2}$



13. $f(x) = 4 - x^2$



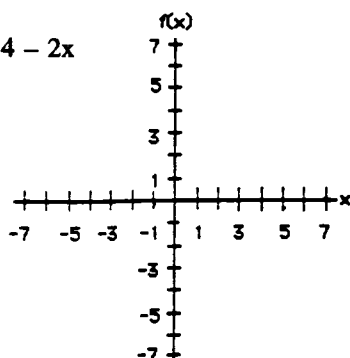
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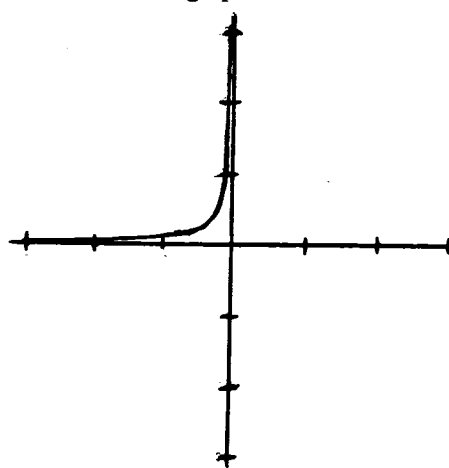
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14. $f(x) = 4 - 2x$



16. Find the inverse function of $f(x) = 4 - 3x$.

15. On the same grid, draw the graph of the inverse of the function whose graph is below.



Given graphs of the following parent functions that have been horizontally shifted, vertically shifted, or reflected be able to state the transformed graph's "middle or starting point", recognize whether or not it has been reflected, and write the equation of the transformed graph: $y=x^2$, $y=\sqrt{x}$, $y=x^3$, $y=x^{1/3}$, $y=|x|$, and $y=x$.