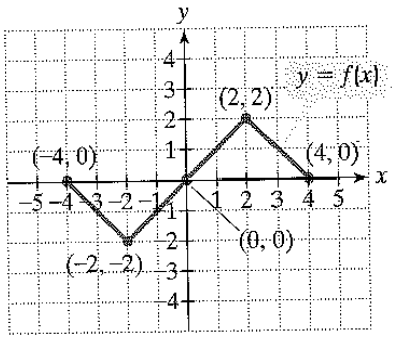
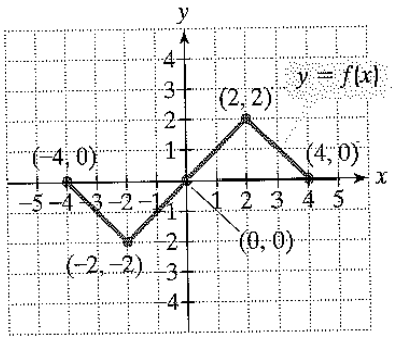
MAT 171 Homework Section 2.5: Transformation of Functions **Name**_____

Use the graph of $y = f(x)$ to graph each function g .

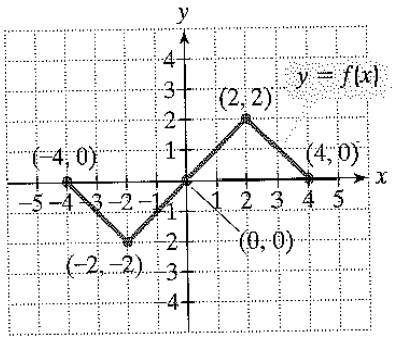
1) $g(x) = f(x) - 1$



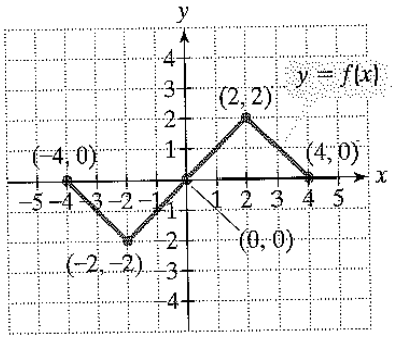
2) $g(x) = f(x-1)$



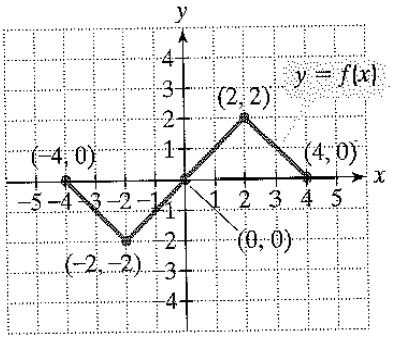
3) $g(x) = f(x-1) + 2$



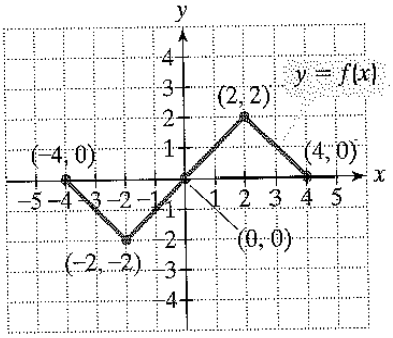
4) $g(x) = -f(x)$



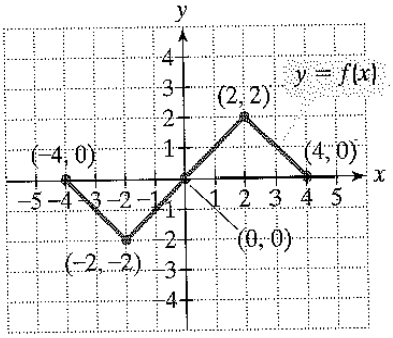
5) $g(x) = f(-x) + 1$



6) $g(x) = 2f(x)$

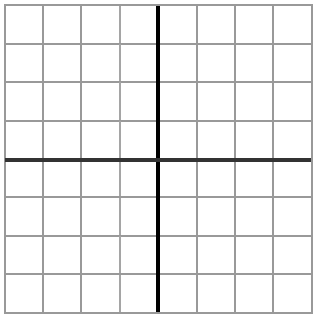


7) $g(x) = f(2x)$

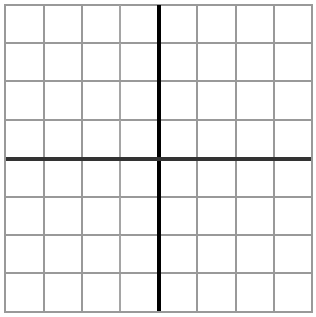


Use transformations of $f(x)=x^2$ to graph the given function.

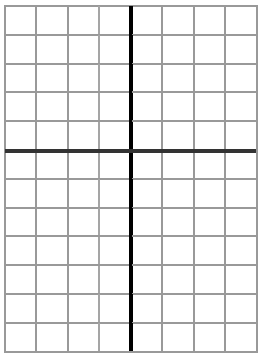
8) $g(x)=x^2-2$



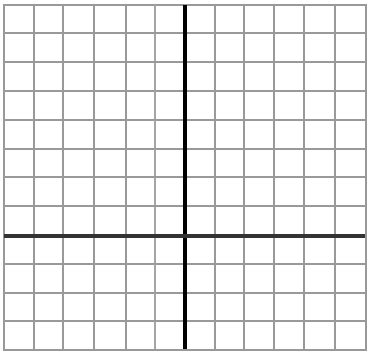
9) $g(x)=(x-2)^2$



10) $g(x)=-(x-2)^2$

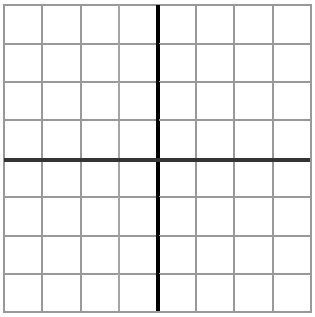


11) $g(x)=(x-2)^2+1$

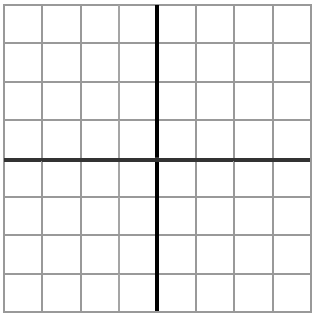


Use transformations of $f(x)=\sqrt{x}$ to graph the given function.

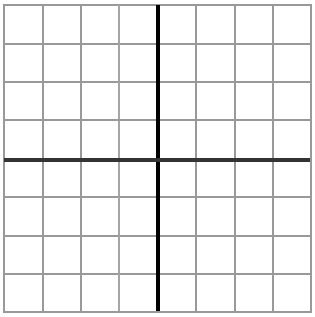
12) $g(x)=\sqrt{x}+2$



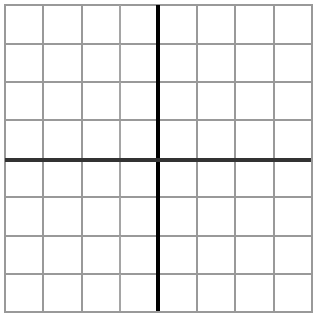
13) $g(x)=\sqrt{x+2}$



14) $g(x)=-\sqrt{x+2}$

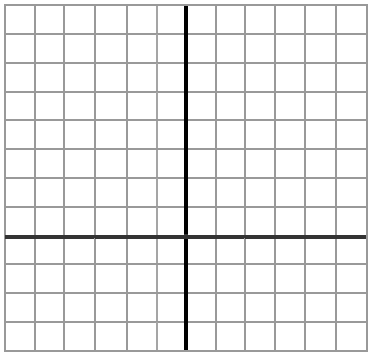


15) $g(x) = \sqrt{x+2} - 2$

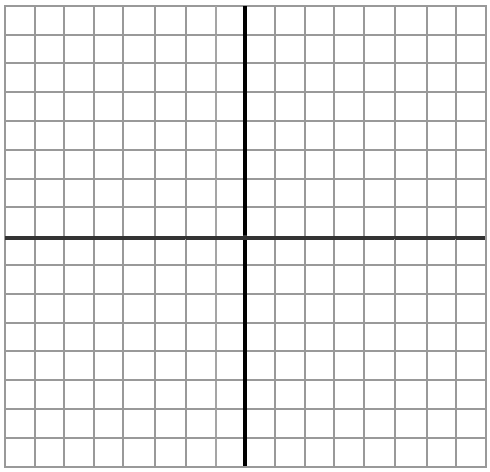


Use transformations of $f(x) = |x|$ to graph the given function.

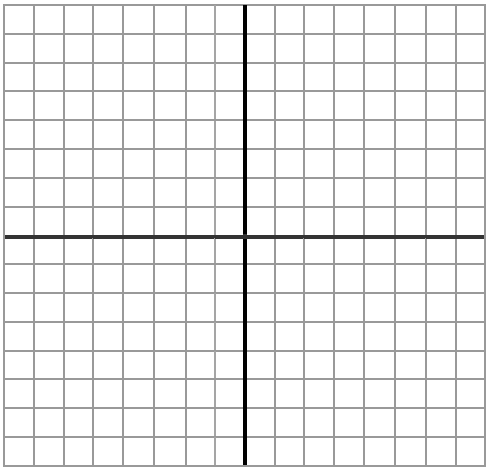
16) $g(x) = |x| + 4$



17) $g(x) = |x+4| - 2$

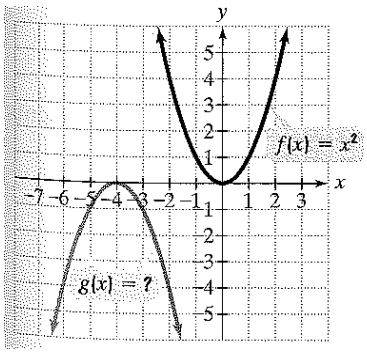


18) $g(x) = -|x+4| + 1$



Functions f and g are graphed in the same rectangular coordinate system. If g is obtained from f through a sequence of transformations, find an equation for g.

19)



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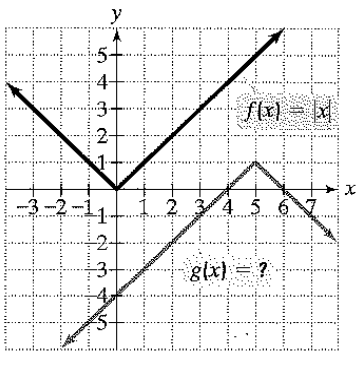
20)



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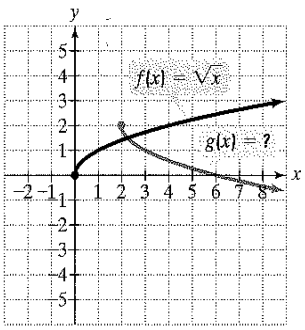
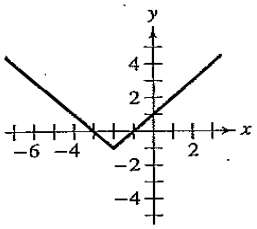


Identify the parent function, state the transformations, and write an equation for the function shown in the graph.

22)



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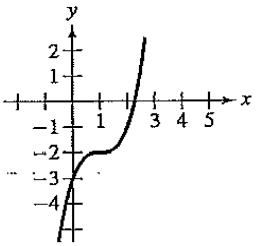

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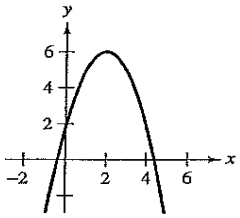

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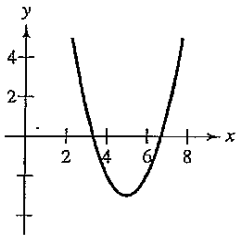

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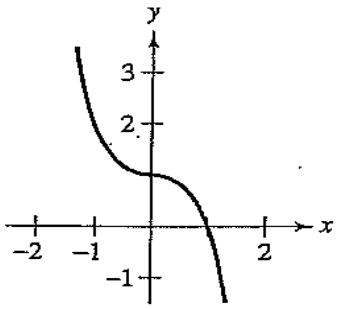

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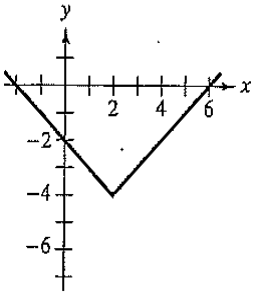

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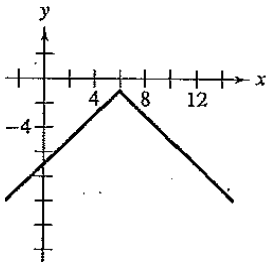

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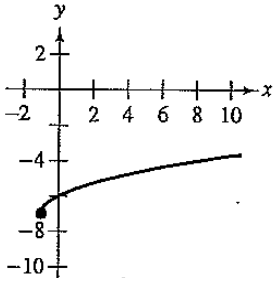

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