

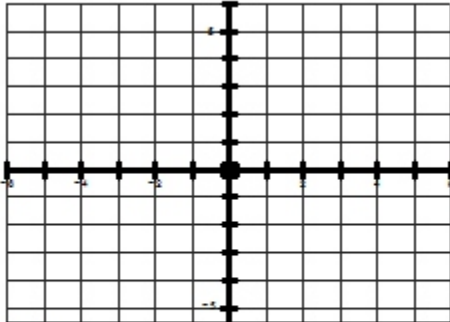
### Graphing Functions: Transformations

For each function: Show the parent graph, use HRV to describe the transformation, graph the function, and label the vertex and x-intercept.

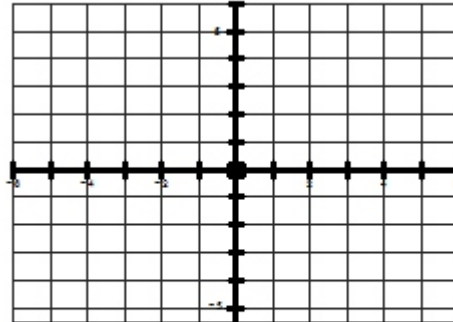
1)  $y = (x - 2)^2$

2)  $y = (x + 3)^2$

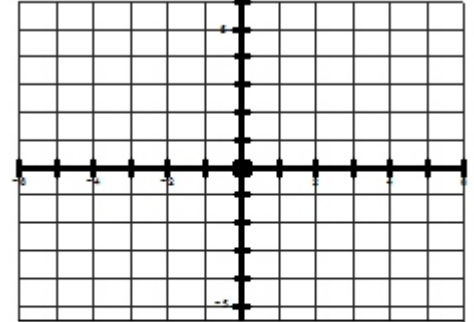
3)  $y = (x - 4)^2$



H:  
R:  
V:



H:  
R:  
V:

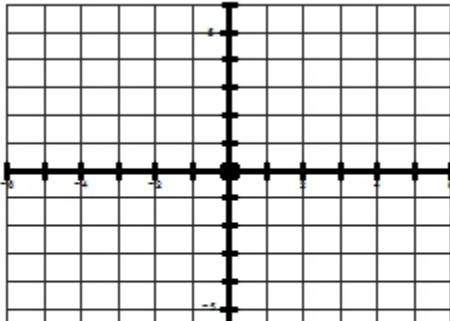


H:  
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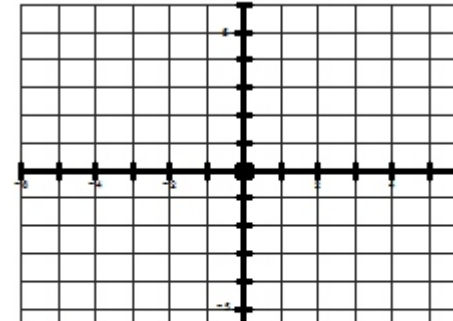
4)  $y = |x + 1|$

5)  $y = \sqrt{x - 2}$

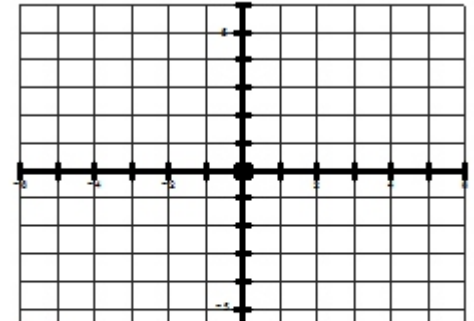
6)  $y = 2^{(x+3)}$



H:  
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V:



H:  
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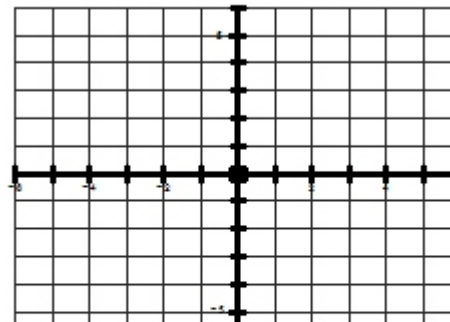


H:  
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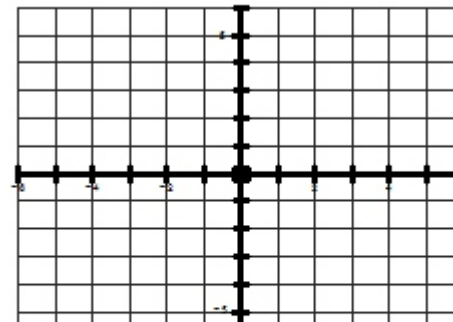
7)  $y = x^2 - 3$

8)  $y = x^2 + 4$

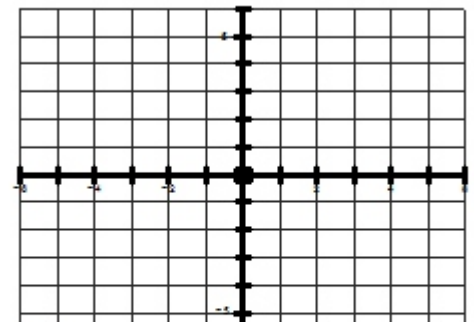
9)  $y = x^2 + 1$



H:  
R:  
V:

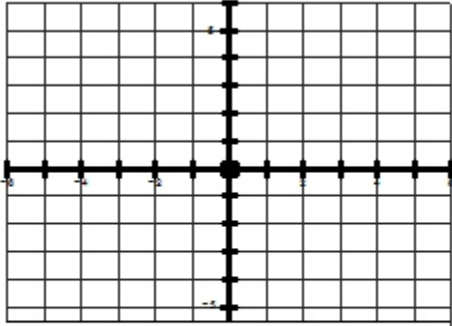


H:  
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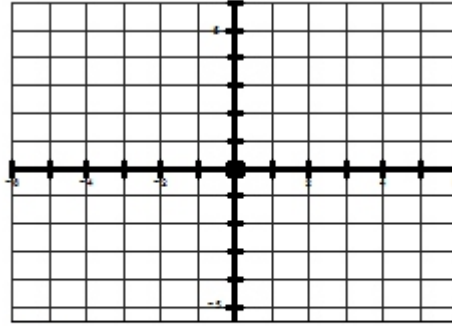
H:  
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V:

10)  $y = \sqrt{x} + 1$   
1



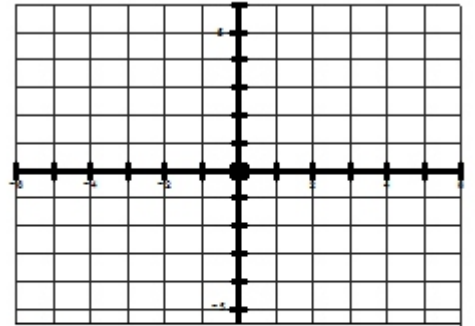
H:  
R:  
V:

11)  $y = x - 3$



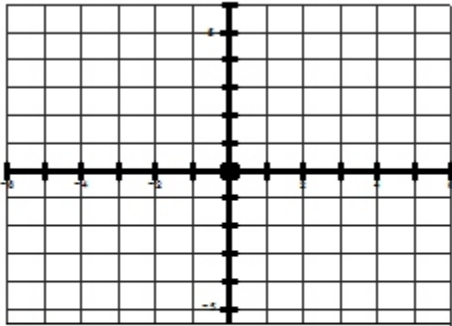
H:  
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V:

12)  $y = |x| - 2$



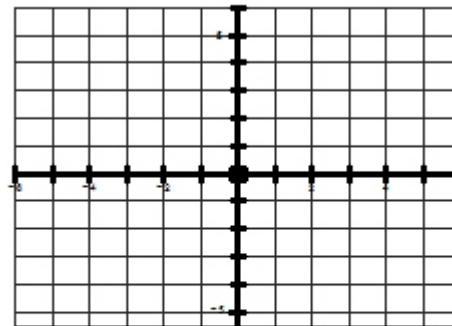
H:  
R:  
V:

13)  $y = (x - 1)^2 - 5$



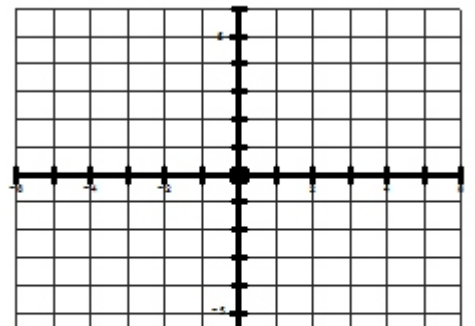
H:  
R:  
V:

14)  $y = (x + 3)^2 + 1$



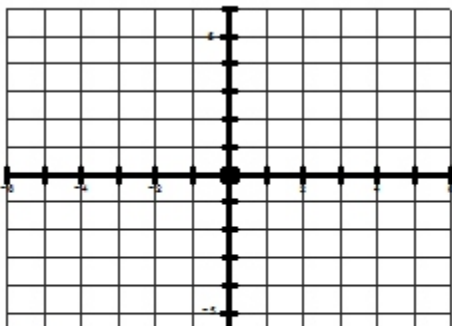
H:  
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V:

15)  $y = (x - 2)^2 - 3$



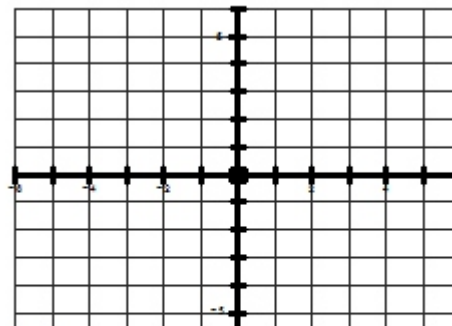
H:  
R:  
V:

16)  $y = |x + 4| + 2$



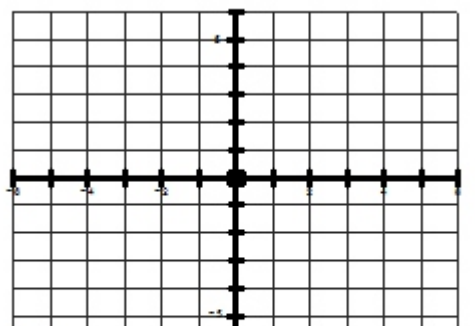
H:  
R:  
V:

17)  $y = \sqrt{x - 2} + 3$



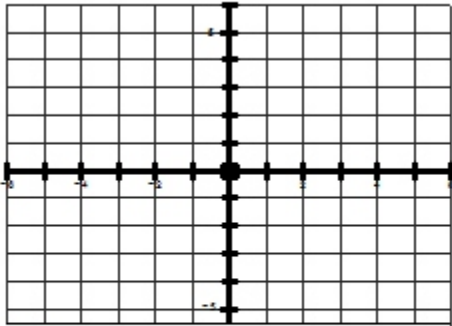
H:  
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V:

18)  $y = 2^{(x-2)} - 1$



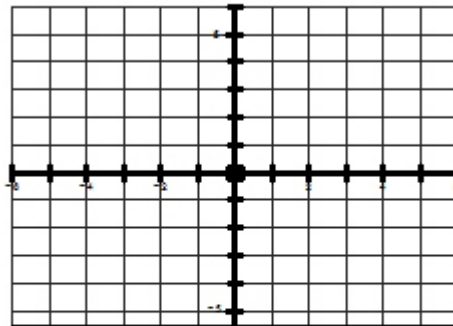
H:  
R:  
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19)  $y = -x$



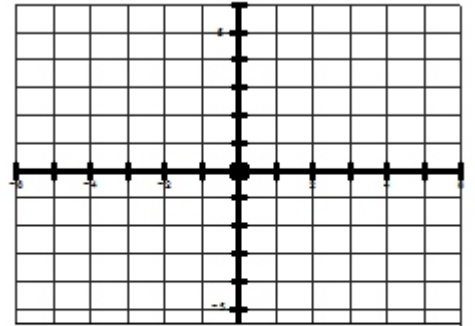
H:  
R:  
V:

20)  $y = -x^2$



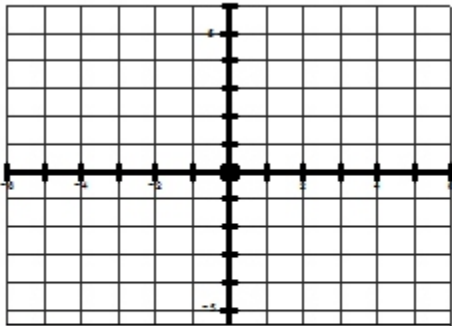
H:  
R:  
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21)  $y = -|x|$



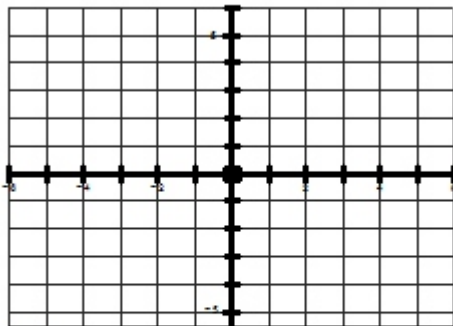
H:  
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22)  $y = -(x + 2)^2$



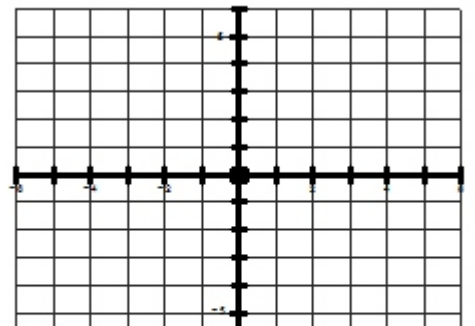
H:  
R:  
V:

23)  $y = -x^2 - 2$



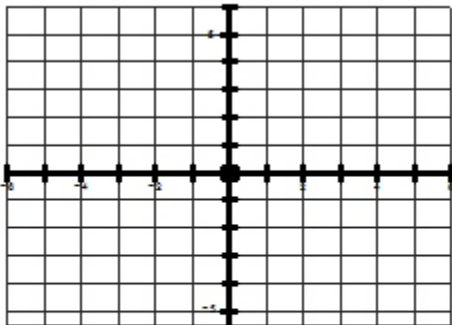
H:  
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V:

24)  $y = -(x - 3)^2 + 3$



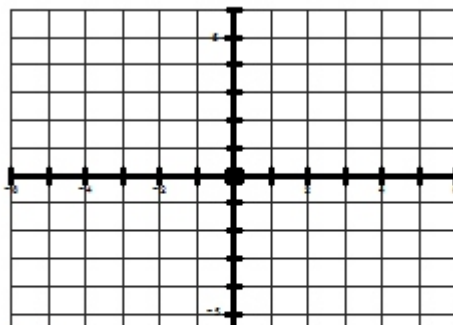
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25)  $y = -\sqrt{x+4} + 1$



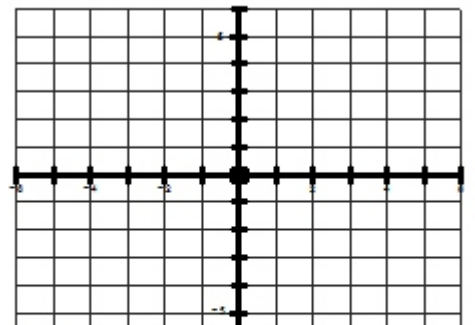
H:  
R:  
V:

26)  $y = -|x + 1| - 2$



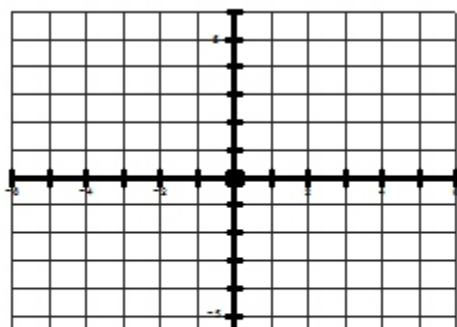
H:  
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V:

27)  $y = -x + 5$



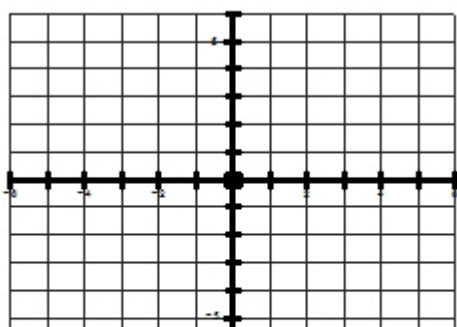
H:  
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28)  $y = -2^{(x-3)} + 2$



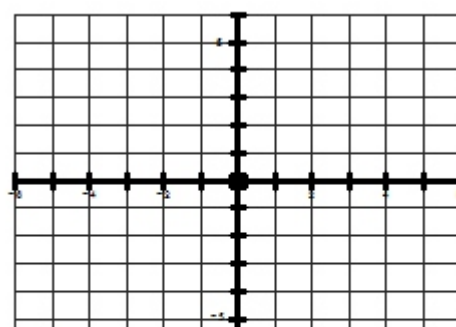
H:  
R:  
V:

29)  $y = -2^{(x+4)} - 3$



H:  
R:  
V:

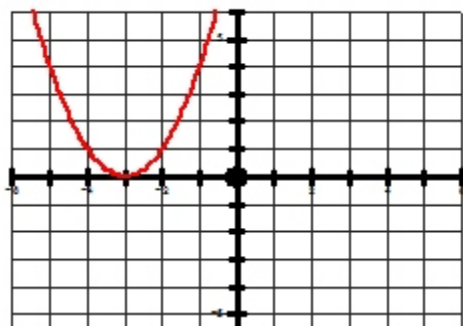
30)  $y = -2^{(x-1)} - 1$



H:  
R:  
V:

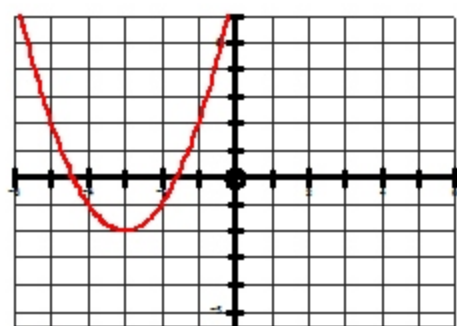
Given the graph of a function write the parent equation, describe the transformations, and give the equation.

31)  
?



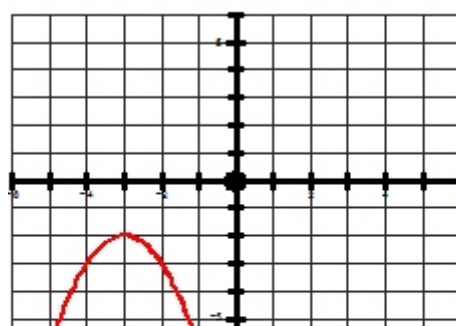
H:  
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32)



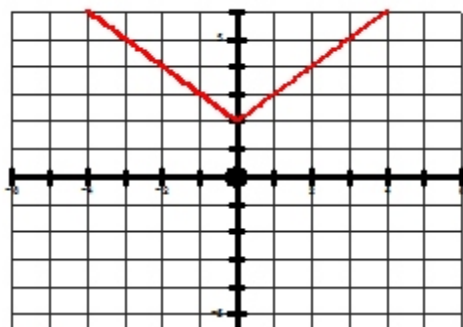
H:  
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33)



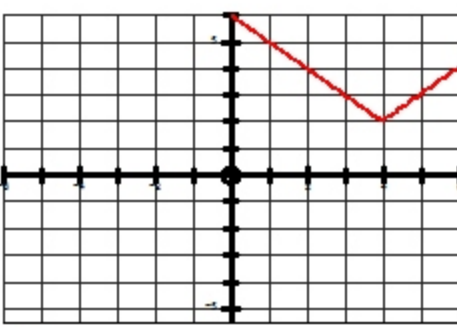
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4)



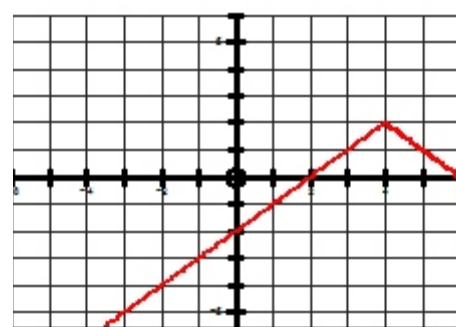
H:  
R:  
V:

35)



H:  
R:  
V:

36)



H:  
R:  
V:

