koolearn
新东方在线

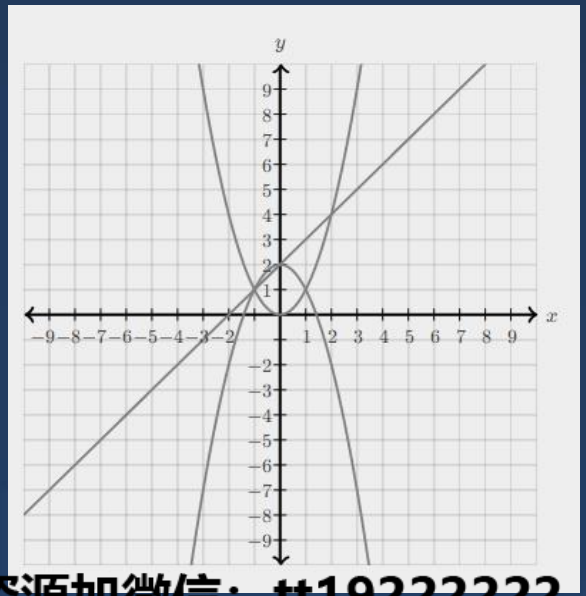
Nonlinear equation graphs

1.The system of equations represented by the graph below is:

$y=x^2$ $y=-x^2+2$ $y=x+2$

Which of the following lists all solutions to the system of equations?

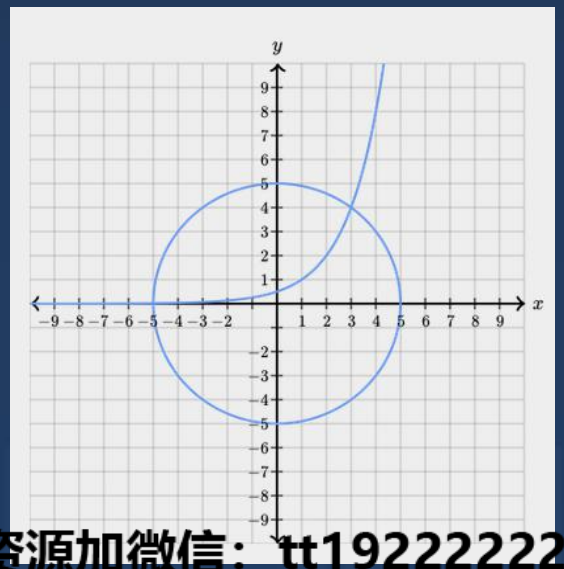
A. $(-1,1)$
B. $(0,2)$
C. $(0,2)$ and $(2,4)$
D. $(-1,-1)$, $(0,2)$, $(1,1)$, and $(2,4)$



2.y=2x−1 x2+y2=25

A system of two equations and their graphs in the xy-plane are shown BELOW. Which of the following ordered pairs is part of the solution set of the system of equations?

A. (3,4)
B. (5,0)
C. (-5,0)
D. (4,3)

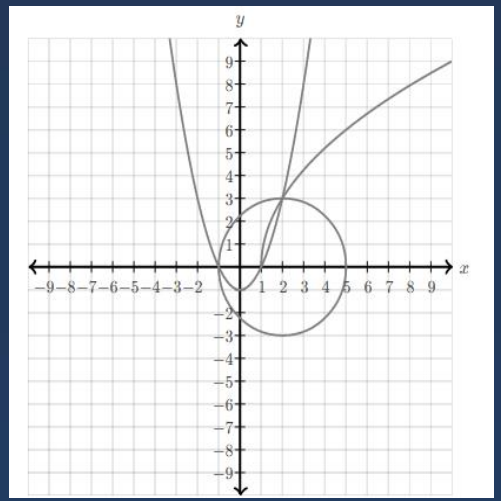


3.The system of equations represented by the graph above is:

9=(x-2)2+y2

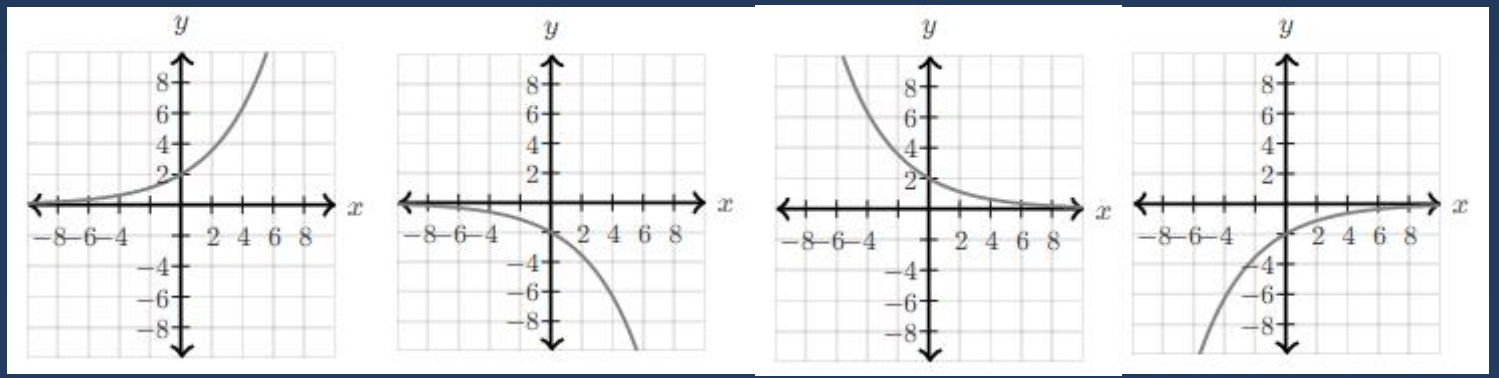
y=x2-1

y=3$\sqrt{x-1}$



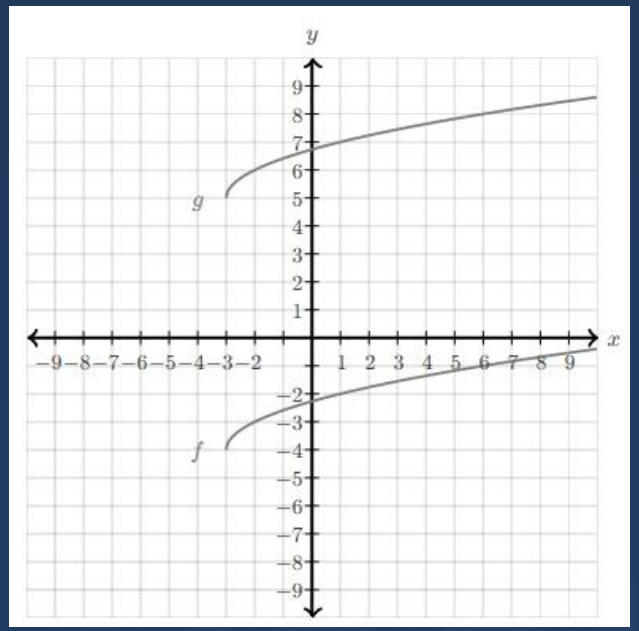
How many solutions does the system have?

4.Which of the following graphs represents the equation $y=-2(\frac{4}{3})x$?

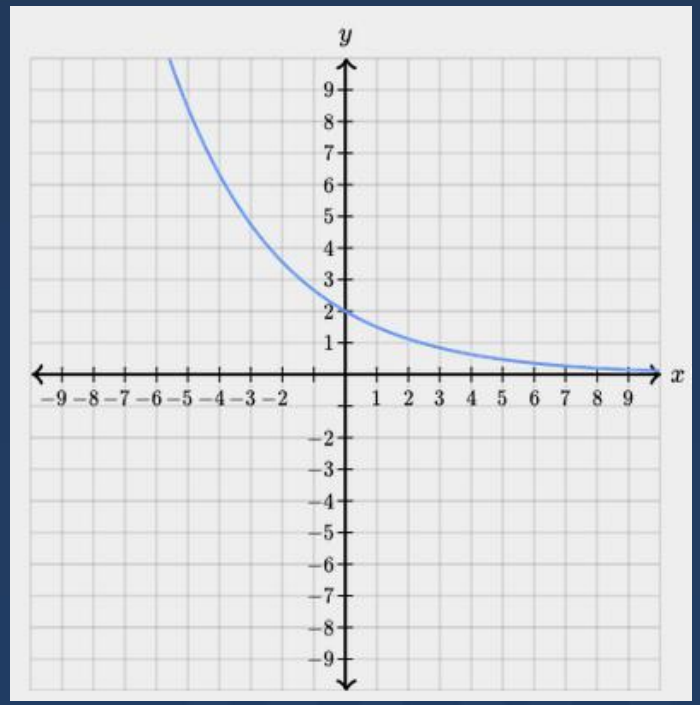


5. The functions y=3(x+2)2−4 and y=−3(x+2)2−4 are graphed in the xy-plane. Which of the following must be true of the graphs of the vertexes and axes of symmetry of the two functions?
Please choose from one of the following options.
A. The functions will have different vertexes.
B. The functions will have different axes of symmetry.
C. The function y=3(x+2)2−4 will have a minimum value, and the function y=−3(x+2)2−4 will have a maximum value.
D. The function y=3(x+2)2−4 will have a maximum value, and the graph of y=-3(x+2)2-4 will have a minimum value.

6.The functions f(x)=$\sqrt{x+3}$ −4 and g(x)= $\sqrt{x+3}$+b are graphed in the xy-plane above. What is the value of b?



7.An exponential equation is graphed in the xy-plane BELOW. Which of the following equations represents the graph?



A. y=2(1.75)x
B. y=2(0.75)x
C. y=0.75(2)x
D. y=1.75(2)x

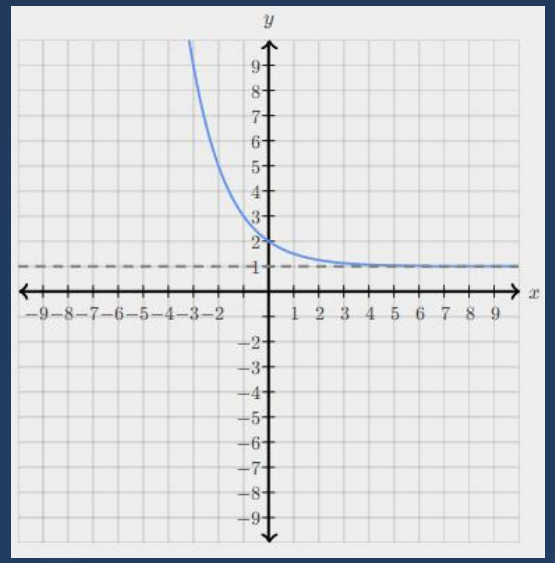
8. A parabola has equation y=2x2−5x−3. What is the x- coordinate of the vertex of the parabola?

9. The functions $g(x)=2(x-5)(x-3)$ and $h(x)=2(x+5)(x+3)$ are graphed in the xy- plane. Which of the following is a true statement?

A. The functions have the same y-intercept.
B. The functions have the same x-intercepts.
C. The functions have the same axis of symmetry.
D. The functions have the same vertex.

10.An exponential function is graphed in the xy-plane below. Which of the following equations could represent the graph?

A. $y=2x+1$
B. $y=2-x+1$
C. $y=2(\frac{1}{2})x$
D. $y=2(\frac{1}{2})x$ -1



11.The graph of y=f(x) is a parabola that is symmetric with respect to the line x=−2. The y- coordinate of the vertex of the graph of f is a maximum function value. Which of the following equations could represent function f?

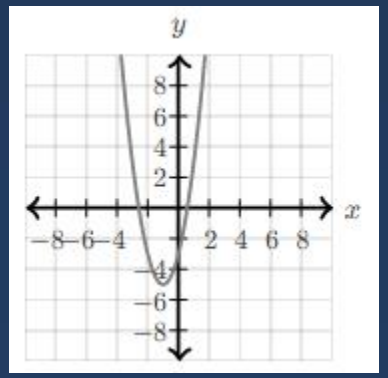
A. f(x) =5(x−2)2+3

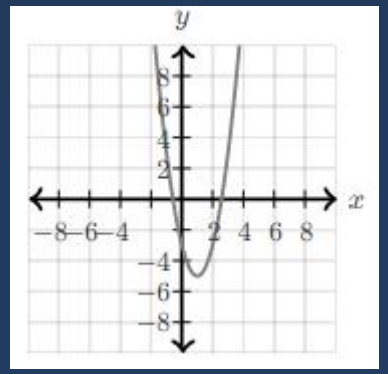
B. f(x) =5(x+2)2+3

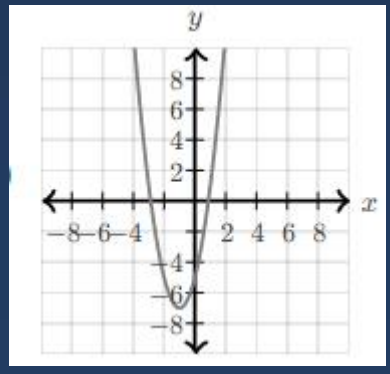
C. f(x) =−5(x−2)2+3

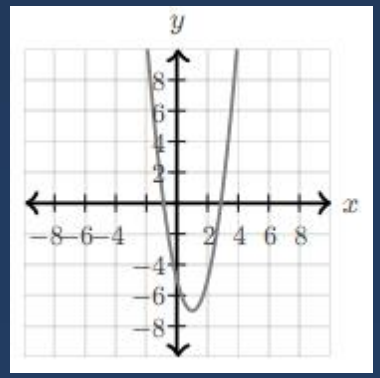
D. f(x) =−5(x+2)2+3

12.Which of the following shows the graph of the equation y=2(x+1)2−5?



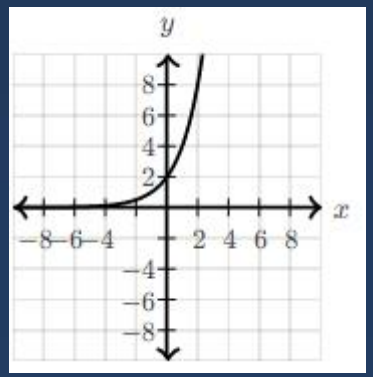


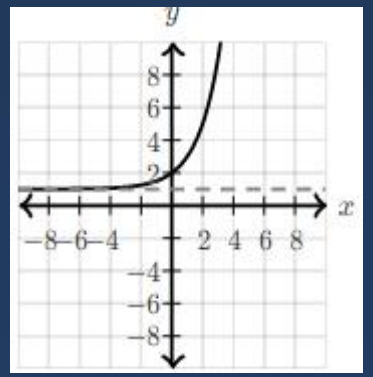


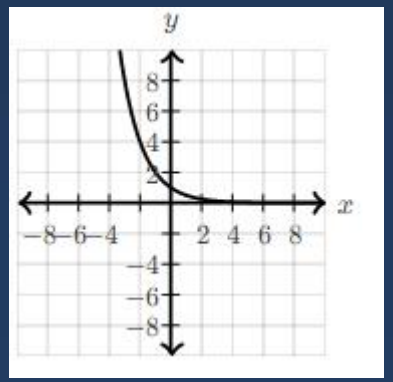


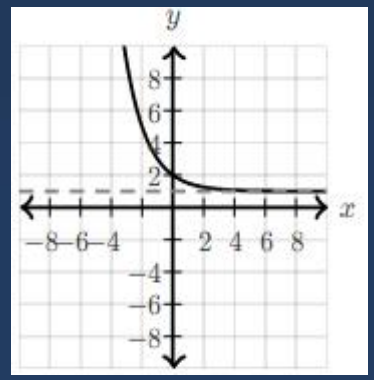
13.The equation y=x^2+6x+b is graphed in the xy-plane. For what value of b is the vertex of the graph of the equation at (−3,0)?

14.Which of the following graphs could represent the equation y=2x+1?



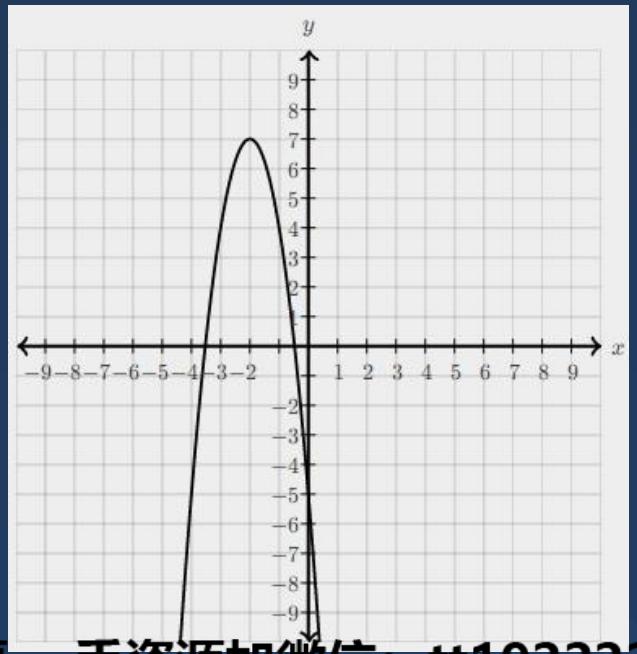






15.A quadratic function is graphed in the xy-plane BELOW. Which of the following equations could represent the graph?

A. y=3x2+12x−5
B. y=3x2+12x+7
C. y=−3x2−12x−5
D. y=−3x2−12x−7



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Thanks

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