Quiz 8.3

Solve Each Equation

1 (2 points)

$$x^4 - 5x^2 + 4 = 0$$

2. (2 points)

$$(x^2 - 1)^2 - 11(x^2 - 1) + 24 = 0$$

3. (2 points)

$$\frac{1}{x^2} - \frac{5}{x} + 6 = 0$$

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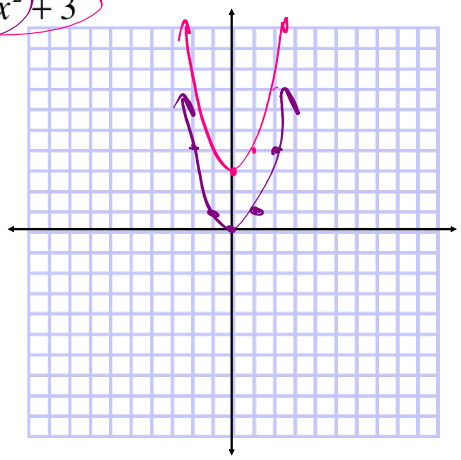
8.4 Graphing Quadratic Functions Using Transformations.

Graph

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



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69) $s(d) = \left(\frac{1}{d+3}\right)^2 - \frac{4}{d+3} + 3$

$s(d) = \left(\frac{1}{d+3}\right)^2 - 4\left(\frac{1}{d+3}\right) + 3$

$u = \frac{1}{d+3}$

$u^2 - 4u + 3 = 0$

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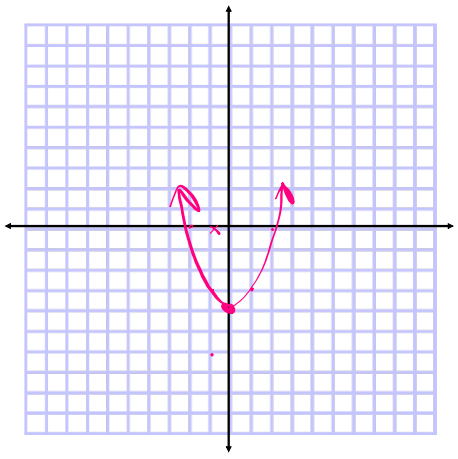
You Try

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



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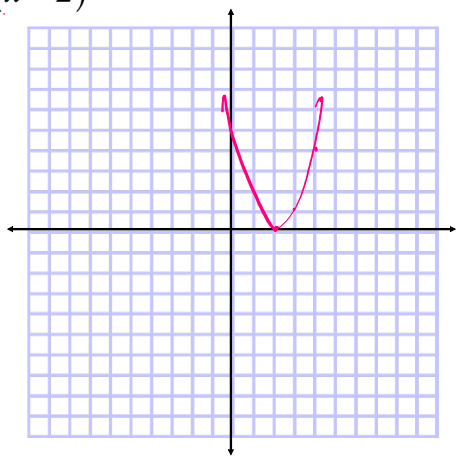
Graph $a(x-h)^2+k$

$f(x)=(x-2)^2$



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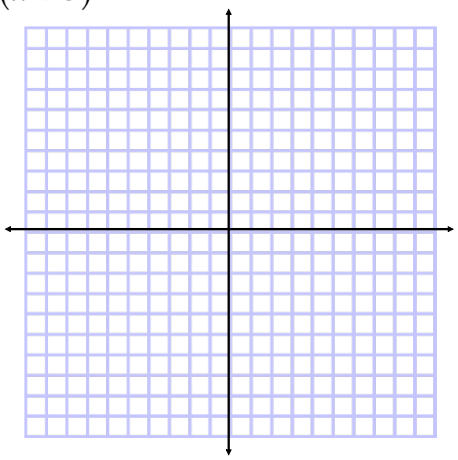
You Try

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



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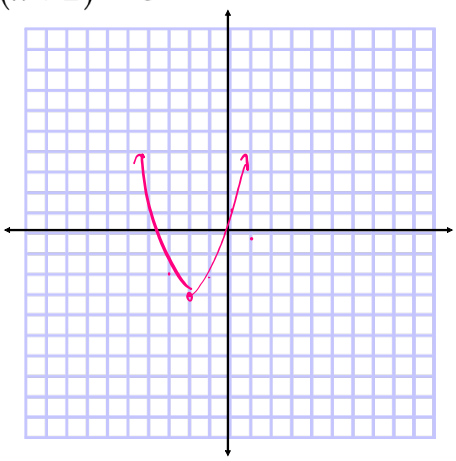
Graph

$f(x)=(x+2)^2-3$



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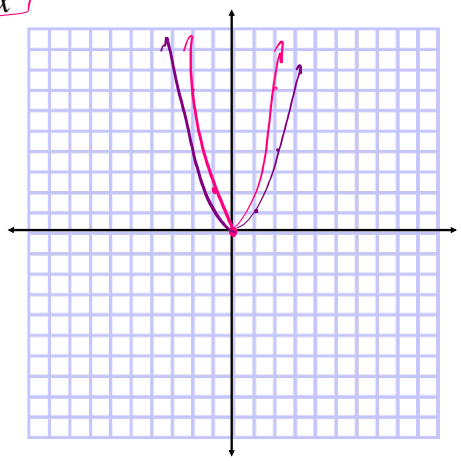
Graph

$f(x)=2x^2$

$f(x)=x^2$



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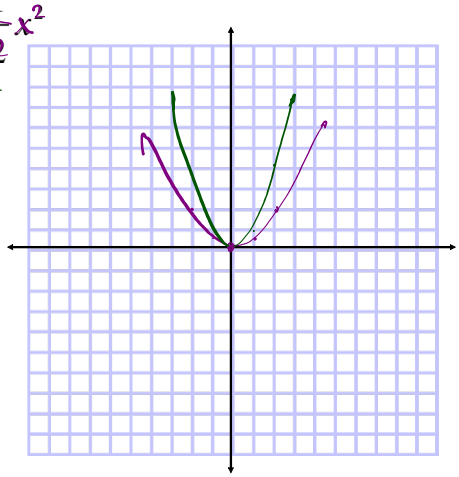
Graph

$f(x)=\frac{1}{2}x^2$

$f(x)=x^2$



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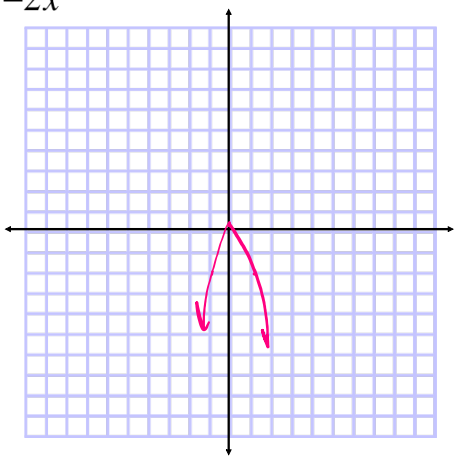
Graph

$f(x)=-2x^2$



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Graph by using transformations. Identify the vertex and axis of symmetry of the parabola. Based on the graph, determine the domain and range of the quadradic function.

$f(x)=x^2+4x+3$

(h,k)

x=-2

complete the □

$x^2+4x=-3$

$\frac{4}{2}=2$ $2^2=4$

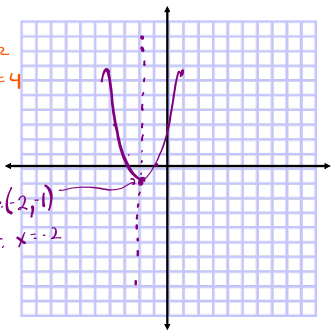
$x^2+4x+4=-3+4$

$(x+2)^2=1$

vertex: (-2,-1)

axis: x=-2

$f(x)=(x+2)^2-1$



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Graph by using transformations. Identify the vertex and axis of summetry of the parabola. Based on the graph, determine the domain and range of the quadradic function.

$f(x)=-2x^2+4x+1$

$-\frac{4}{2}=-1$ $(-1)^2=1$

$-2x^2+4x=-1$

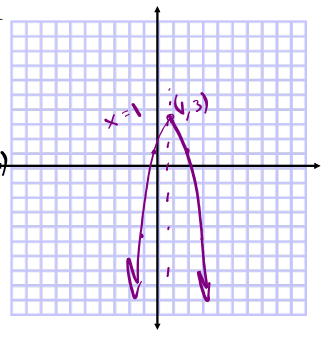
$-2(x^2-2x)=-1$

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

$-2(x-1)^2=-3$

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

$a(x-h)^2+k$



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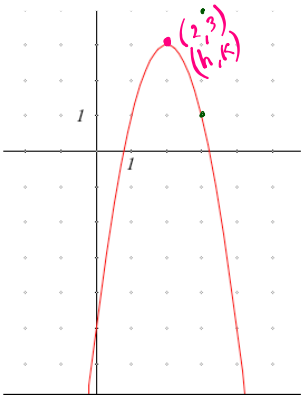
Give an equation in function form $f(x) = a(x-h)^2 + k$ of the following graph.

$f(x) = -2(x-2)^2 + 3$



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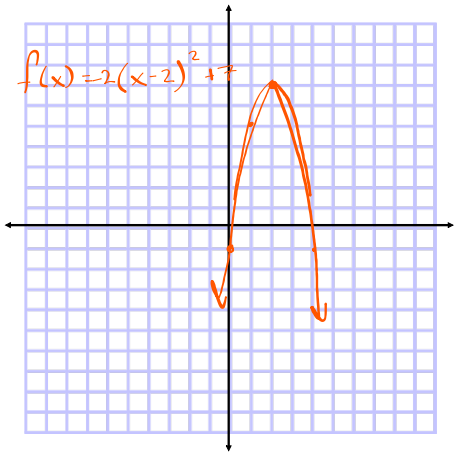
Graph



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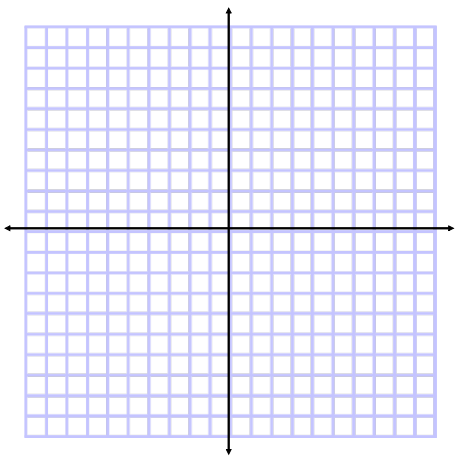
Graph



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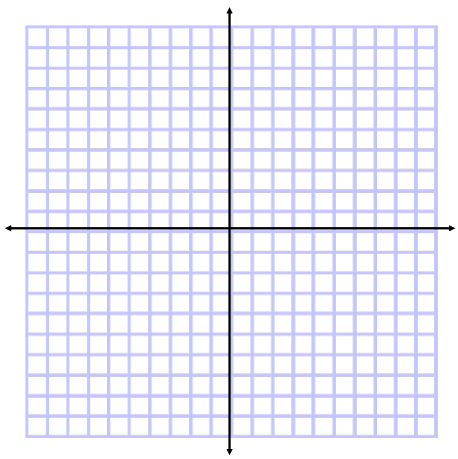
Graph



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