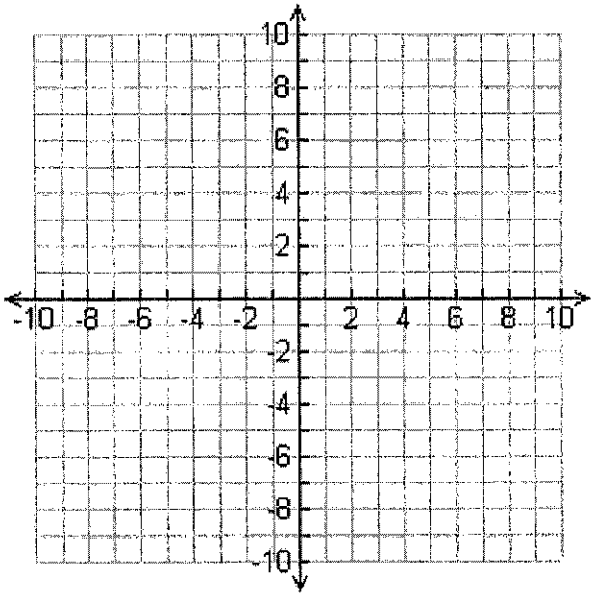
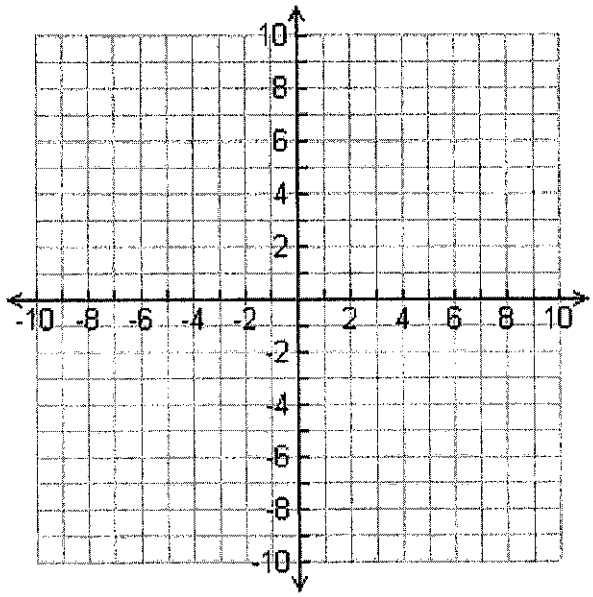
Name _____ Algebra Quadratic Graphing TEST REVIEW

Graph the following quadratic functions:

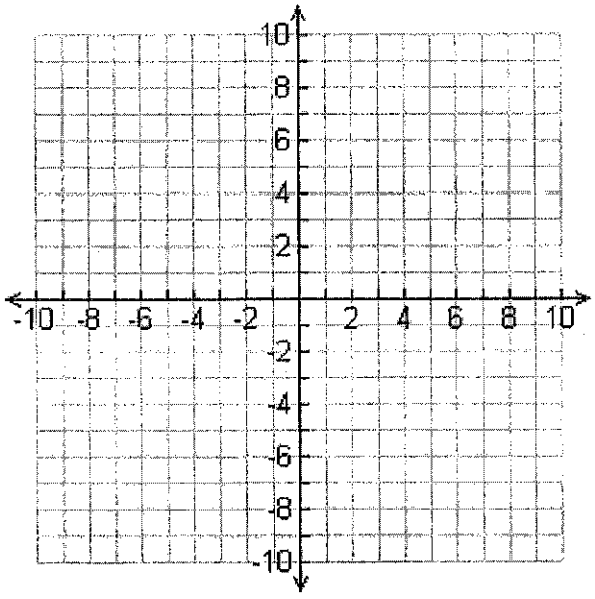
1. $y < x^2 - 5$



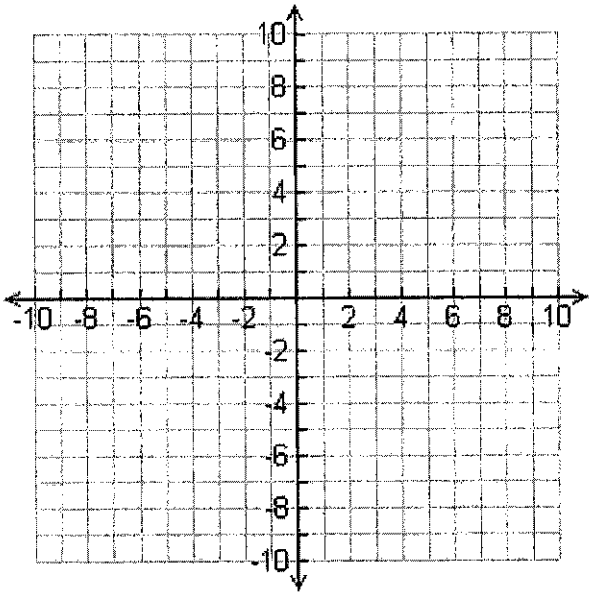
2. $y \leq -2x^2 + 1$



3. $y \geq \frac{1}{2}x^2 - 4$



4. $Y > -x^2 + 6$



5. $y = -2x^2 - 7x + 1$

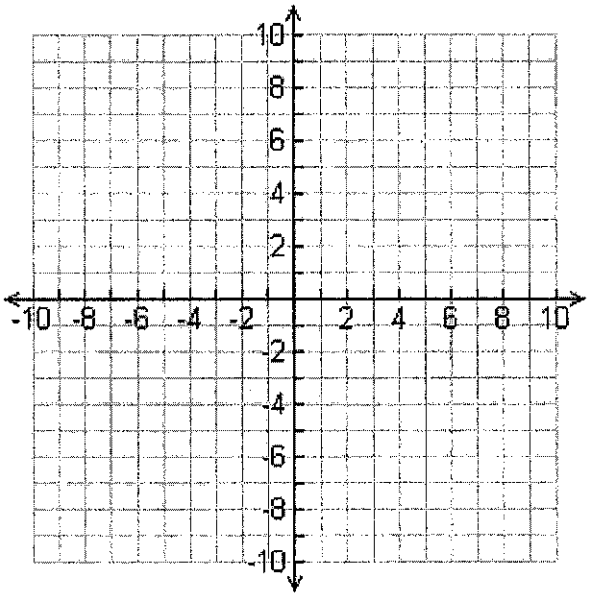
AOS _____

Vertex _____

y-intercept _____

domain _____

range _____



6. $y = -\frac{1}{3}(x + 3)^2 - 2$

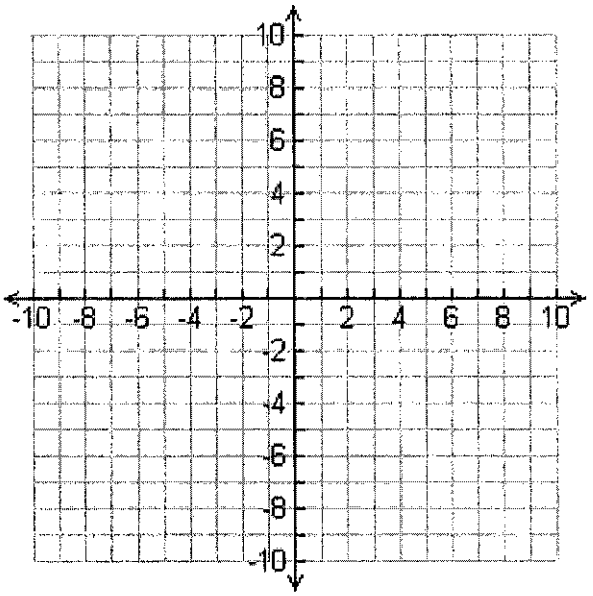
AOS _____

Vertex _____

y-intercept _____

domain _____

range _____



7. Write the functions in order from most narrow to widest

A. $y = x^2 - 3x$ B. $y = -3x^2 + 5x - 1$ C. $y = -\frac{2}{3}x^2 + 2x - 1$

D. $y = 5x^2 - 2$ E. $y = \frac{1}{5}x^2 + 5$

Without graphing, answer the following:

8. $y = \frac{1}{4}(x - 24)^2 + 50$

A. AOS _____

B. vertex _____

C. y-intercept _____

D. Domain _____

E. Range _____

F. vertex is max/min? _____

G. graph is more wide or narrow than $y = x^2$?

_____

9. $y = -5x^2 + 28x - 24$

A. AOS _____

B. vertex _____

C. y-intercept _____

D. Domain _____

E. range _____

F. vertex is max/min? _____

G. graph is more wide or narrow than $y = x^2$?

_____

For #10-14 write a function in vertex form:

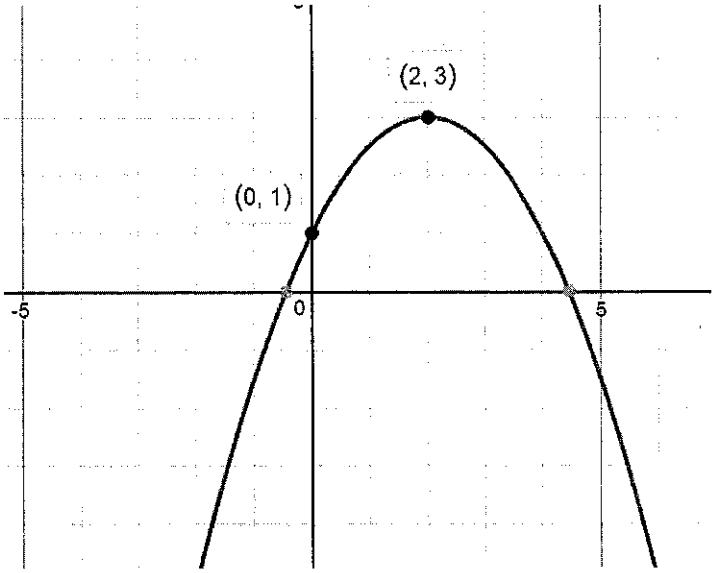
10. $y = -2x^2 - 12x + 20$

11. $Y = 5x^2 + 40x + 12$

12. contains (0, 104) vertex is (12, 8)

13. Contains (0, -2) vertex (-1, -7)

14.



15. A ball is thrown with an initial upward velocity of 50 ft/s. Its height h in feet after t seconds is given by the function $h = -16t^2 + 50t + 6$.

A. After how many seconds does the ball reach its maximum height?_____

B. what is the maximum height? _____

16. A small company markets a new toy. The function $S = -64p^2 + 2400p$ predicts in dollars, the total sales S as a function of the price p of a toy.

A. If the price is $25, what are the total sales? _____

B. Which price will produce the highest sales? _____

C. What is the maximum sales predicted? _____