

Order the functions from the narrowest to the widest.

1) $f(x) = \frac{1}{2}x^2$; $g(x) = -2x^2$; $h(x) = 5x^2$

2) $f(x) = \frac{1}{4}x^2$; $g(x) = -3x^2$; $h(x) = x^2$

Compare the graph of each function to $f(x) = x^2$

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

4) $g(x) = \frac{1}{5}x^2 - 2$

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

width: _____

width: _____

width: _____

open: _____

open: _____

open: _____

up/down: _____

up/down: _____

up/down: _____

vertex: _____

vertex: _____

vertex: _____

A.O.S: _____

A.O.S: _____

A.O.S: _____

6) Convert to standard form: $y = 2(x-3)^2 + 5$

7) Convert to vertex form: $y = 2x^2 - 8x + 4$

Graph the following functions. Then state the domain and range.

8) $y = 2x^2 - 8x - 3$

9) $y = -2x^2 + 4x - 7$

10) $y = -x^2 - 2x + 3$

Vertex: _____, AOS: _____

Vertex: _____, AOS: _____

Vertex: _____, AOS: _____

y-int: _____ Max/Min _____

y-int: _____ Max/Min _____

y-int: _____ Max/Min _____

Domain: _____

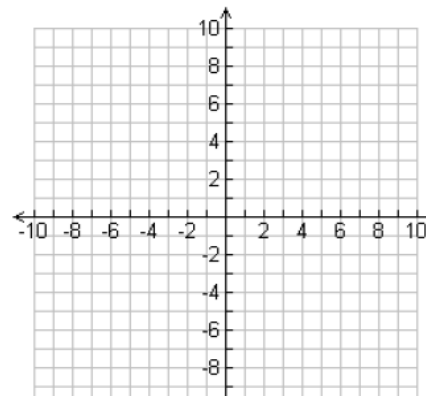
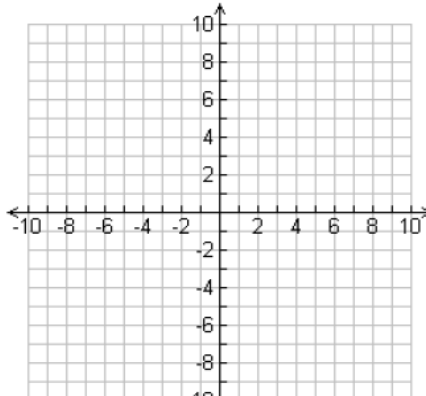
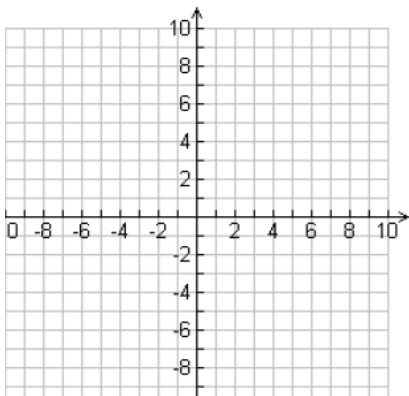
Domain: _____

Domain: _____

Range: _____

Range: _____

Range: _____



$$11) y = (x-2)^2 - 4$$

$$12) y = 2(x-3)^2 - 8$$

$$13) y = -(x+3)^2 + 4$$

Vertex: _____, AOS: _____

Vertex: _____, AOS: _____

Vertex: _____, AOS: _____

y-int: _____ Max/Min _____

y-int: _____ Max/Min _____

y-int: _____ Max/Min _____

Domain: _____

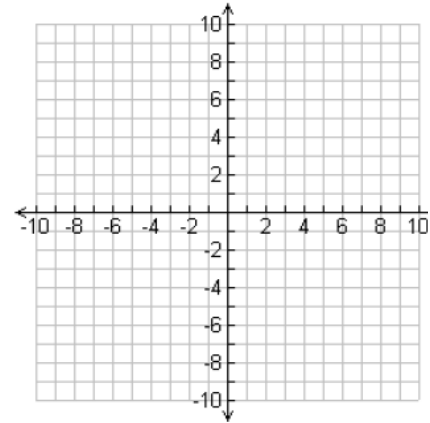
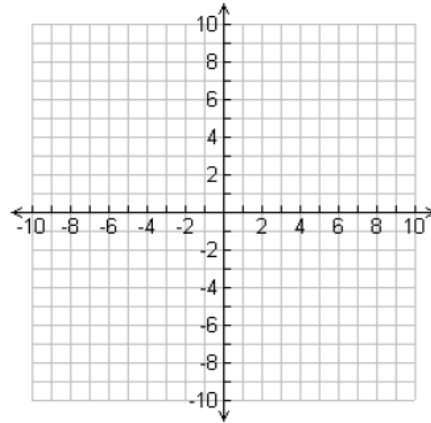
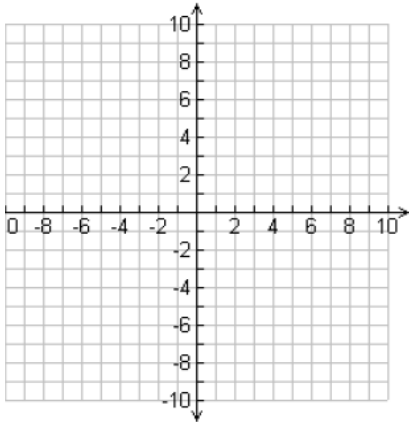
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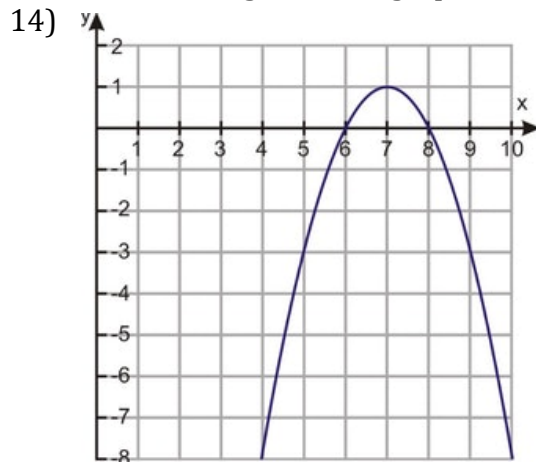
Range: _____

Range: _____

Range: _____



Find the following from the graph below.



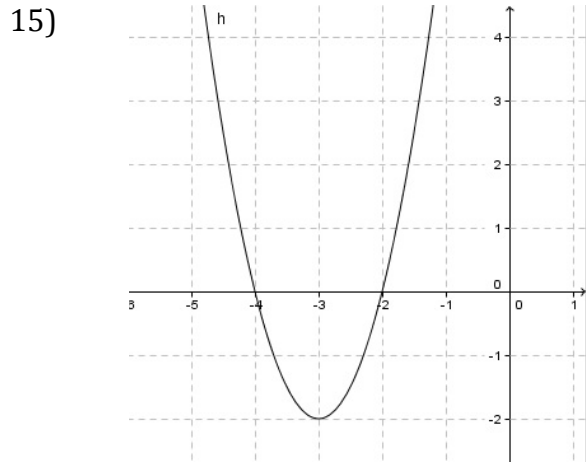
Vertex: _____ A.O.S.: _____

Zeros: _____ y-int: _____

Max/Min: _____ Range: _____

Vertex Form: _____

Standard Form: _____



Vertex: _____ A.O.S.: _____

Zeros: _____ y-int: _____

Max/Min: _____ Range: _____

Vertex Form: _____

Standard Form: _____