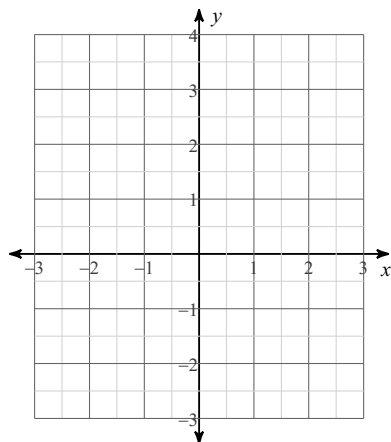


## Week 7 Homework - Working With Vertex Form

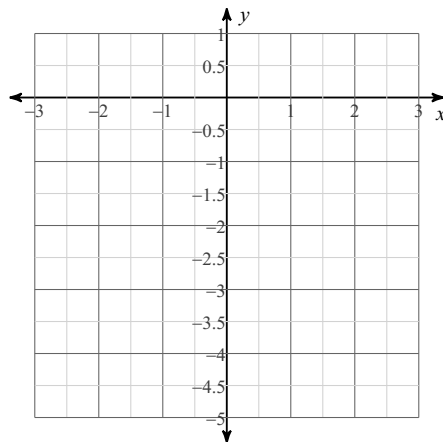
Period \_\_\_\_\_

**Sketch the graph of each function. Find the vertex (max or min) and any x-intercepts/ roots/ zeroes**

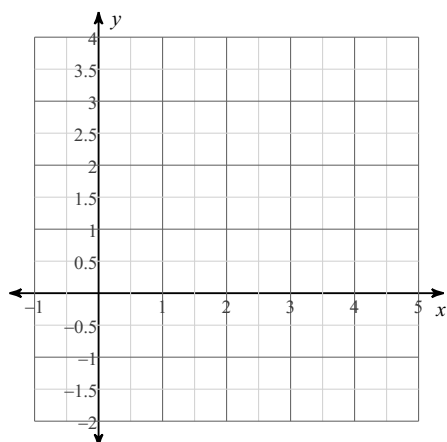
1)  $f(x) = \frac{1}{4}x^2$



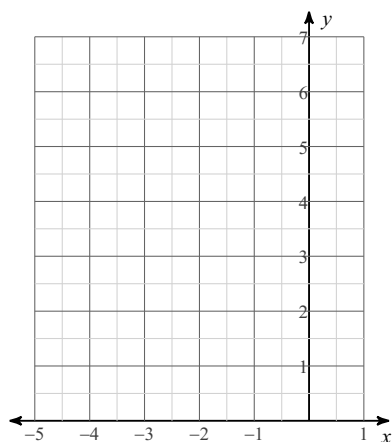
2)  $f(x) = -x^2$



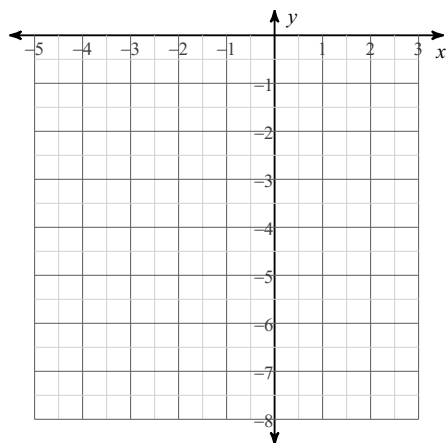
3)  $y = (x - 2)^2 - 1$



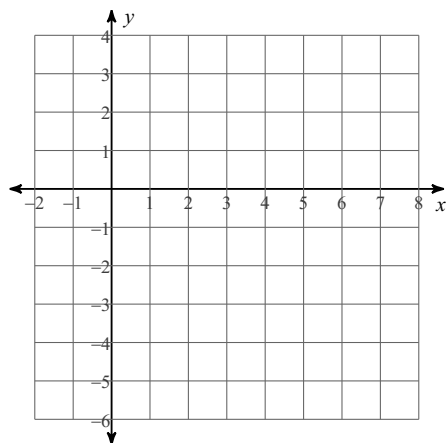
4)  $y = (x + 3)^2 + 2$



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



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



**Find each product.**

7)  $(v - 6)(v + 1)$

8)  $(n + 3)(n + 4)$

9)  $(b - 7)(b - 5)$

10)  $(n - 5)^2$

**Multiply the polynomials.**

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

12)  $y = 2(x - 3)^2 + 1$

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

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