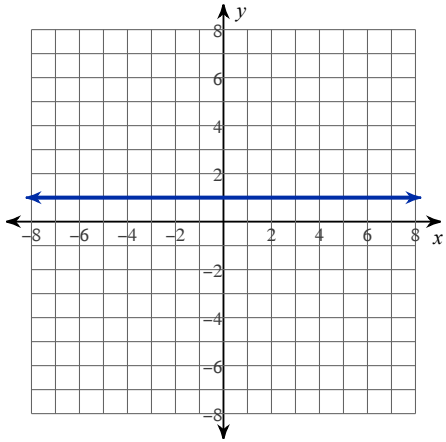


Unit 1 Review

For each graph below, give the parent function name and equation.

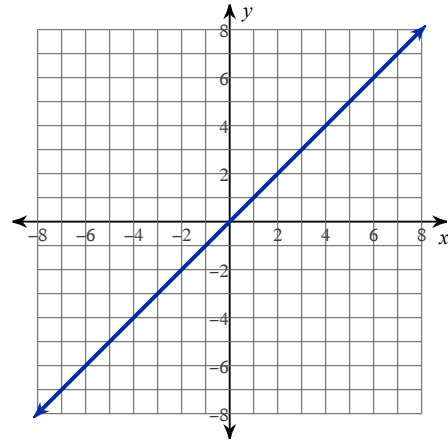
1) name: \_\_\_\_\_

equation: \_\_\_\_\_



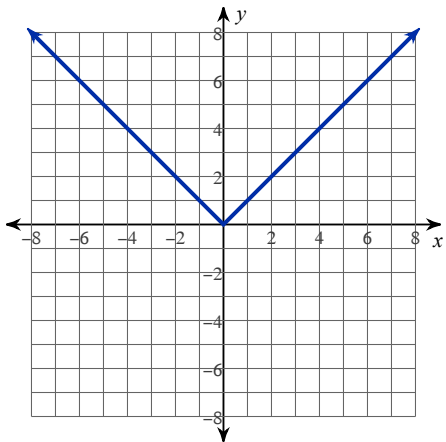
2) name: \_\_\_\_\_

equation: \_\_\_\_\_



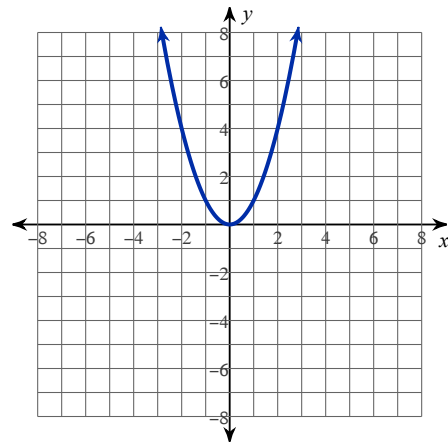
3) name: \_\_\_\_\_

equation: \_\_\_\_\_



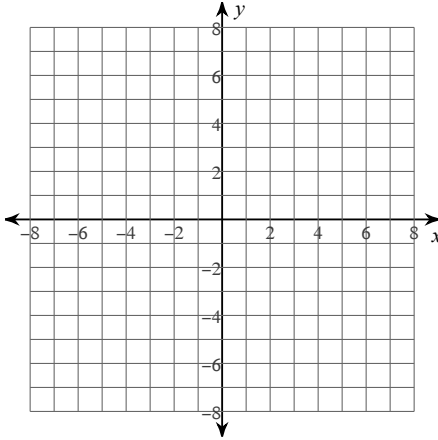
4) name: \_\_\_\_\_

equation: \_\_\_\_\_

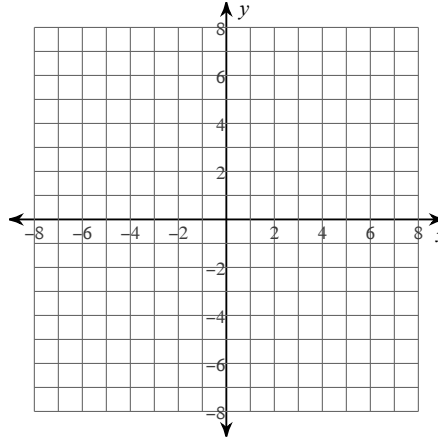


Identify the vertex and axis of symmetry of each parabola. Then sketch the graph.

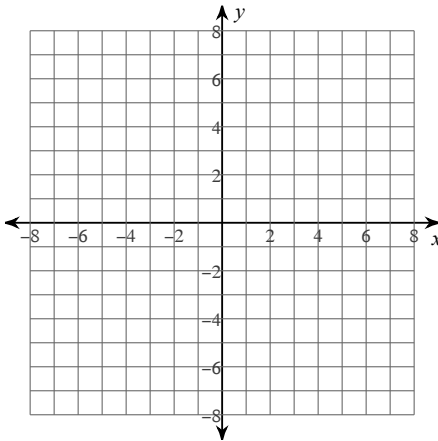
5)  $f(x) = 2(x + 4)^2 - 6$



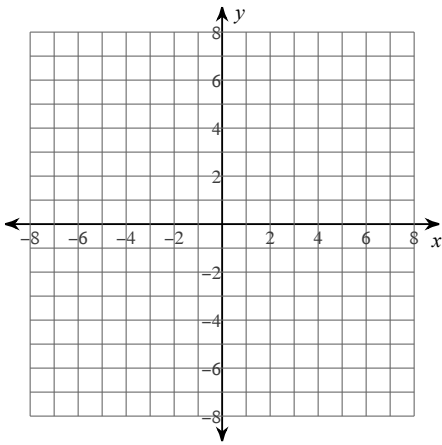
6)  $f(x) = -2(x - 5)^2 - 1$



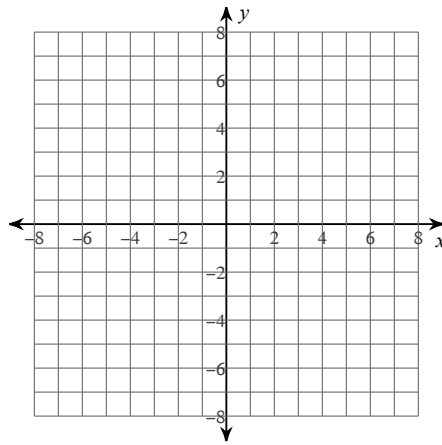
7)  $f(x) = -(x - 2)^2 - 3$



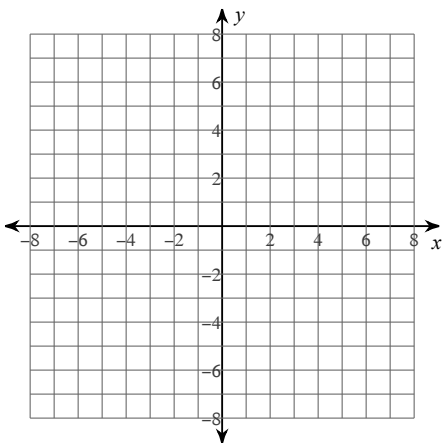
8)  $f(x) = x^2 - 6x + 3$



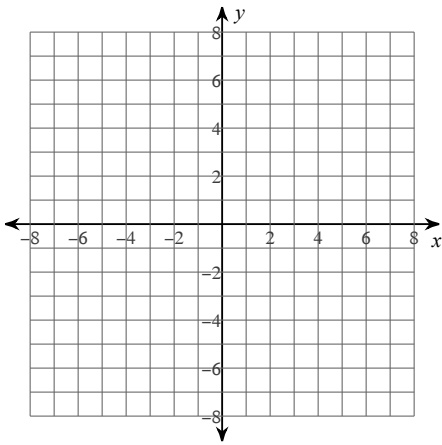
9)  $f(x) = x^2 + 2x - 3$



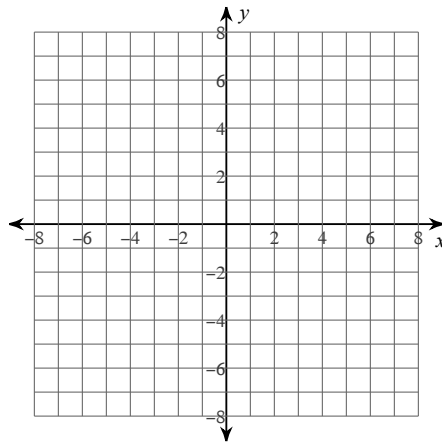
10)  $f(x) = -x^2 - 4x - 6$



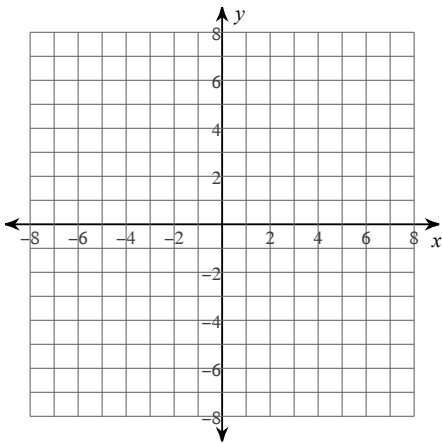
11)  $f(x) = (x - 4)(x - 2)$



12)  $f(x) = -(x + 5)(x + 3)$



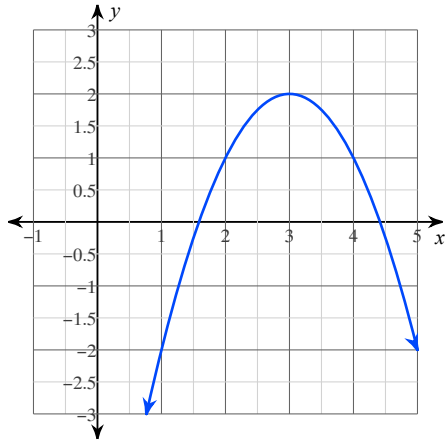
13)  $f(x) = 2(x - 3)(x - 1)$



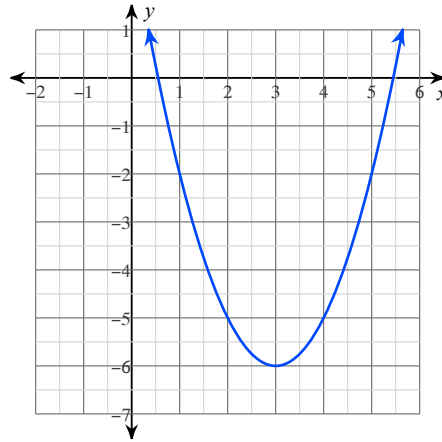
Use the information provided to write the VERTEX FORM equation of each parabola.

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

14)



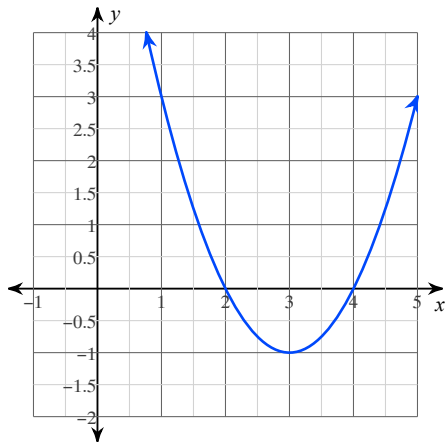
15)



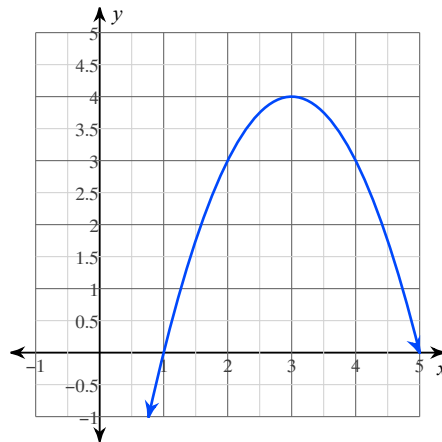
Use the information provided to write the INTERCEPT FORM equation of each parabola.

$$y = a(x - p)(x - q)$$

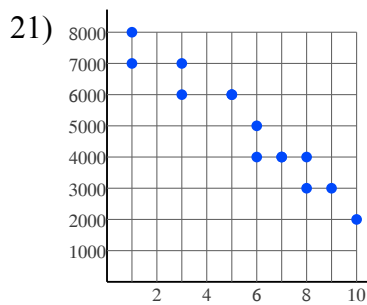
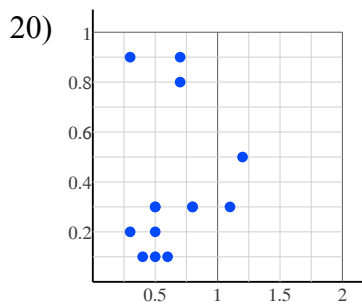
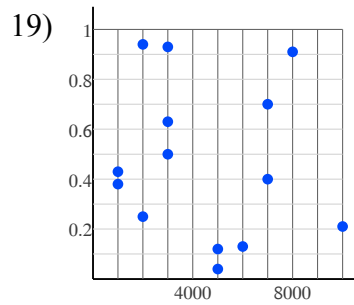
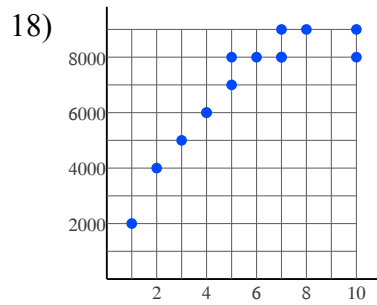
16)



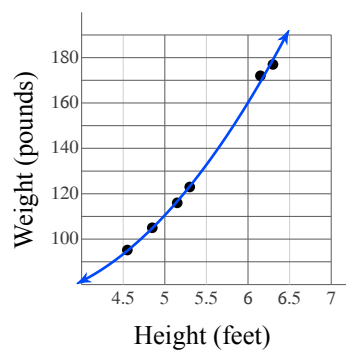
17)



State if there appears to be a positive correlation, negative correlation, or no correlation.



22) The height and weight of adults can be related by the equation  $y = 10.3x^2 - 63.3x + 170$  where  $x$  is height in feet and  $y$  is weight in pounds.



a) Using this model, what would be the weight of someone who is 5.7 ft tall? Round your answer to the nearest tenth.

b) According to the model, what would be the weight of someone who is 6 ft tall? Round your answer to the nearest tenth.

# Answers to Unit 1 Review

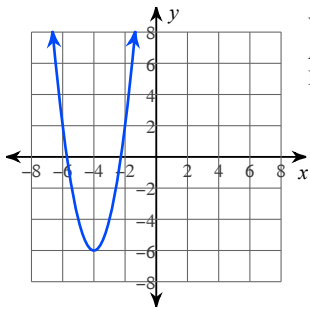
1) name: constant function

equation:  $y = 1$

3) name: absolute value function

equation:  $y = |x|$

5)



Vertex:  $(-4, -6)$   
Axis of Sym.:  $x = -4$   
Min value =  $-6$

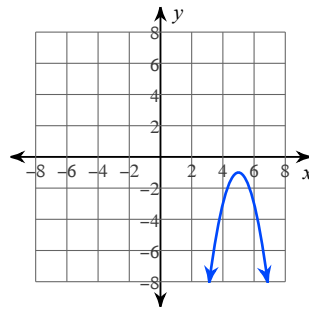
2) name: linear function

equation:  $y = x$

4) name: quadratic function

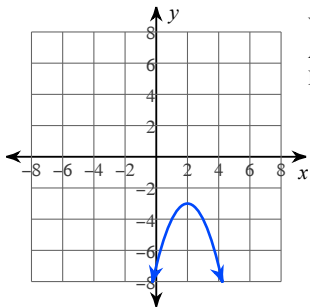
equation:  $y = x^2$

6)



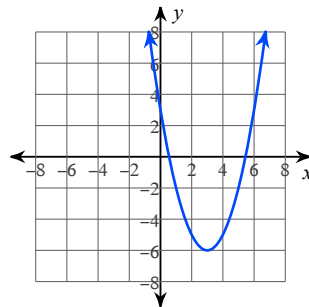
Vertex:  $(5, -1)$   
Axis of Sym.:  $x = 5$   
Max value =  $-1$

7)



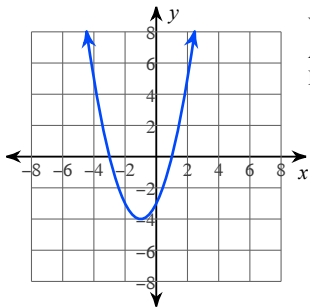
Vertex:  $(2, -3)$   
Axis of Sym.:  $x = 2$   
Max value =  $-3$

8)



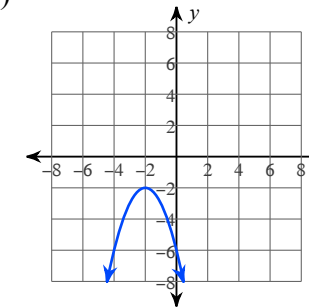
Vertex:  $(3, -6)$   
Axis of Sym.:  $x = 3$   
Min value =  $-6$

9)



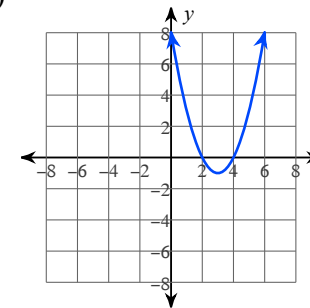
Vertex:  $(-1, -4)$   
Axis of Sym.:  $x = -1$   
Min value =  $-4$

10)



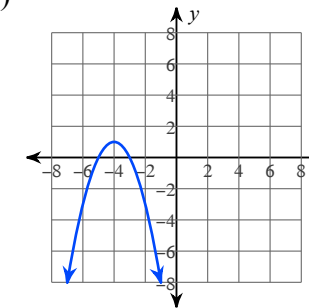
Vertex:  $(-2, -2)$   
Axis of Sym.:  $x = -2$   
Max value =  $-2$

11)



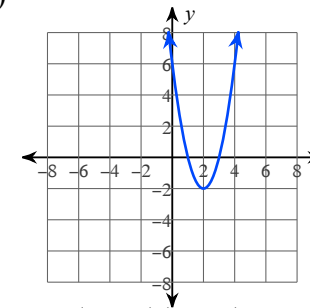
Vertex:  $(3, -1)$   
Axis of Sym.:  $x = 3$   
Min value =  $-1$

12)



Vertex:  $(-4, 1)$   
Axis of Sym.:  $x = -4$   
Max value =  $1$

13)



Vertex:  $(2, -2)$   
Axis of Sym.:  $x = 2$   
Min value =  $-2$

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

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

16)  $y = (x - 4)(x - 2)$

17)  $y = -(x - 5)(x - 1)$

18) Positive correlation

19) No correlation

20) No correlation

21) Negative correlation

22) 143.8 lbs, 161 lbs