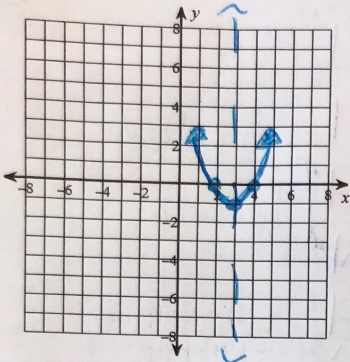


$$11) f(x) = (x-4)(x-2)$$

INTERCEPT FORM

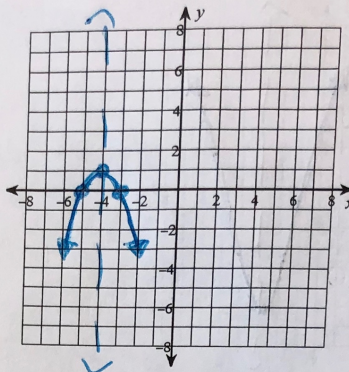


X-INTERCEPTS AT $x=4, x=2$

AXIS OF SYMMETRY: $x=3$

VERTEX: $y = (3-4)(3-2)$
 $= (-1)(1)$
 $= (-1) \rightarrow (3, -1)$

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

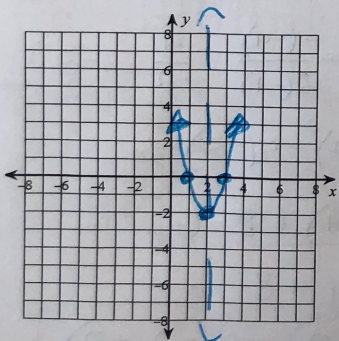


X-INTERCEPTS AT $x=-5, x=-3$

AXIS OF SYMMETRY: $x=-4$

VERTEX: $y = -(-4+5)(-4+3)$
 $= -(1)(-1)$
 $= -1 \cdot -1$
 $= (1) \rightarrow (-4, 1)$

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



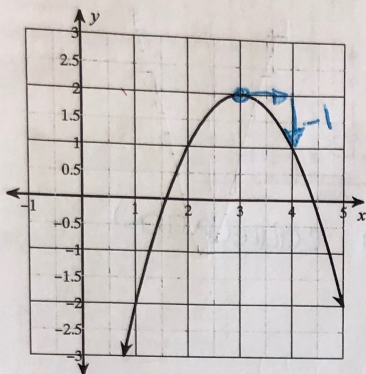
X-INTERCEPTS AT $x=3, x=1$

AXIS OF SYMMETRY: $x=2$

VERTEX: $y = 2(2-3)(2-1)$
 $= 2(-1)(1)$
 $= (-2)(1)$
 $= (-2) \rightarrow (2, -2)$

Use the information provided to write the VERTEX FORM equation of each parabola.
 $y = a(x - h)^2 + k$

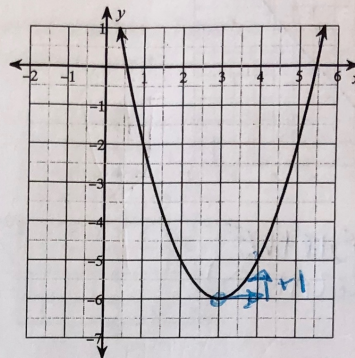
14)



VERTEX: $(3, 2)$
 a-VALUE: -1

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

15)

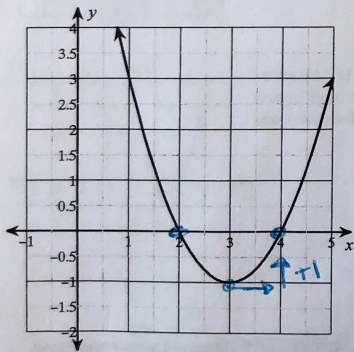


VERTEX: $(3, -6)$
 a-VALUE: 1

$$y = 1(x - 3)^2 - 6$$

Use the information provided to write the INTERCEPT FORM equation of each parabola.
 $y = a(x - p)(x - q)$

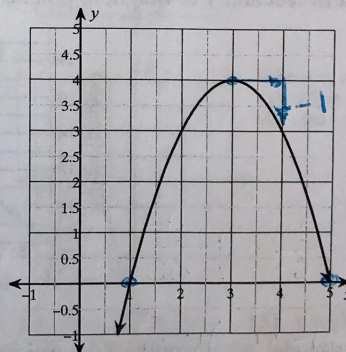
16)



X-INTS: 2 AND 4
 a-VALUE: 1

$$y = 1(x - 2)(x - 4)$$

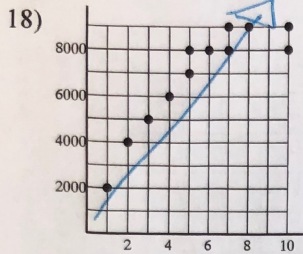
17)



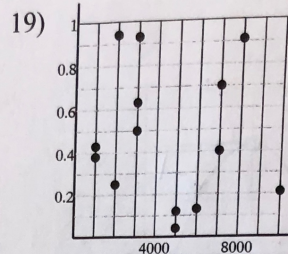
X-INTS: 1 AND 5
 a-VALUE: -1

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

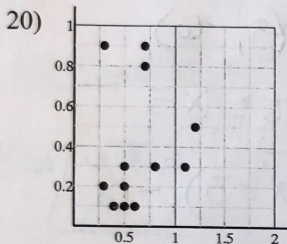
State if there appears to be a positive correlation, negative correlation, or no correlation.



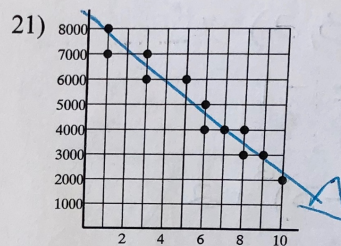
POSITIVE
CORRELATION



NO CORRELATION

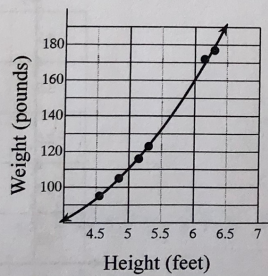


NO CORRELATION



NEGATIVE 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.

$$y = 10.3(5.7)^2 - 63.3(5.7) + 170$$

$$y = 143.837$$

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

$$y = 10.3(6)^2 - 63.3(6) + 170$$

$$y = 161$$