

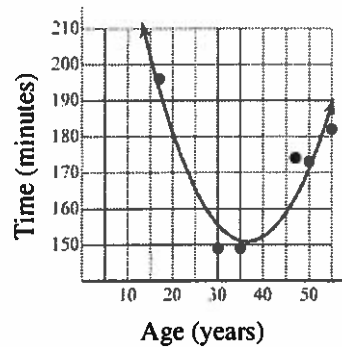
Algebra I Packet # 5

- I.) Watch two videos on Curve of best fit.
- II.) Write a brief summary on how to use the curve of best fit to solve quadratic equations.
- III.) Read the given problem involving the Marine Corps Marathon.
- IV.) Solve problems a).
b).
c).

The time for the fastest runner for their age in the Marine Corps Marathon is given for several ages:

Age	Time (minutes)
17	196
30	149
35	149
47	174
50	173
55	182

This can be modeled by the equation $y = 0.111x^2 - 8.1x + 299$ where x is the age and y is the number of minutes taken.



- Using this model, what would be the time for the fastest 41-year-old? Round your answer to the nearest hundredth.
- According to the model, what would be the time for the fastest 83-year-old? Round your answer to the nearest hundredth.
- What age(s) correspond to a time of 171 minutes? Round your answer(s) to the nearest tenth.