

An object is launched at 19.6 meters per second (m/s) from a 58.8-meter tall platform. When does the object strike the ground?

An object is launched directly upward at 64 feet per second (ft/s) from a platform 80 feet high. What will be the object's maximum height? When will it attain this height?

Solve the following system algebraically.

$$y = x^2 - 10 + 14$$

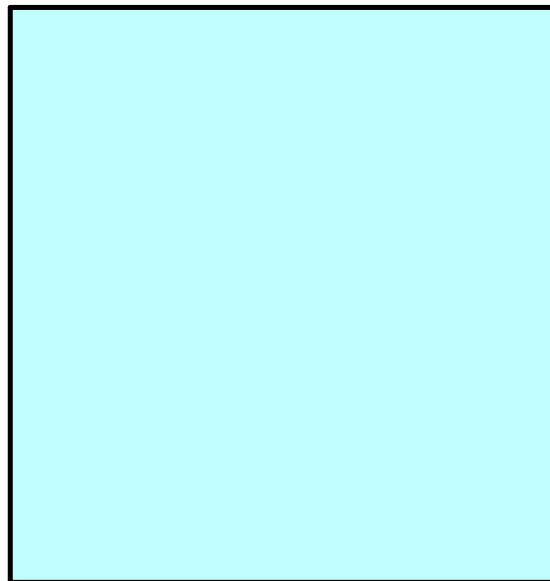
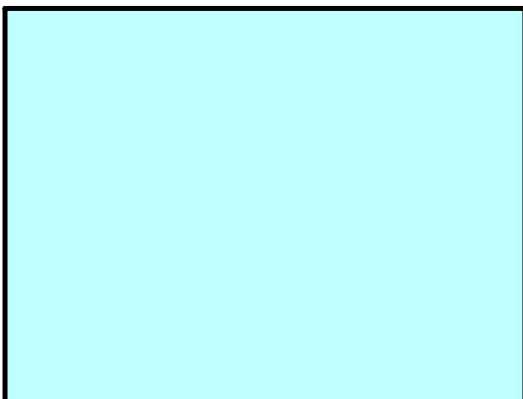
$$y = 7x - 16$$

In a right triangle, the shorter leg is 7 inches less than the longer leg, and the hypotenuse is 2 inches larger than the longer leg. Find the dimensions of the triangle.

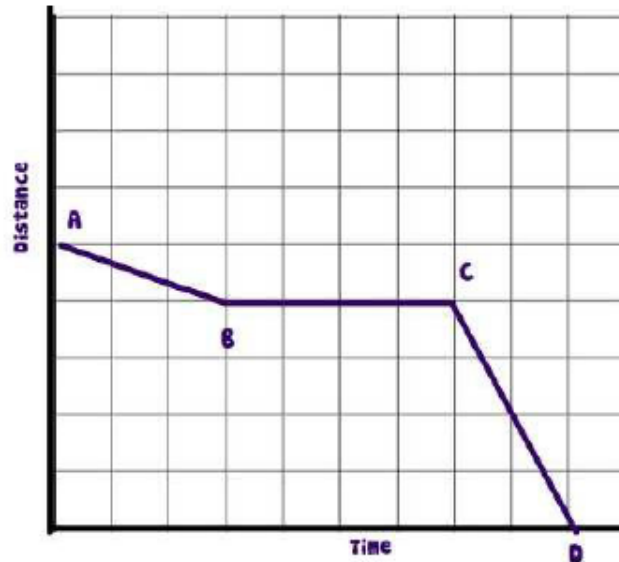
For Makayla's 16th birthday, her Grandmother gave her a present of \$5000. Makayla decided to put this money in the bank account that earns 6% interest per year.

- a) Write a function that represents how much money Makayla will make over time.
- b) What will Makayla's balance be on her 21st birthday?

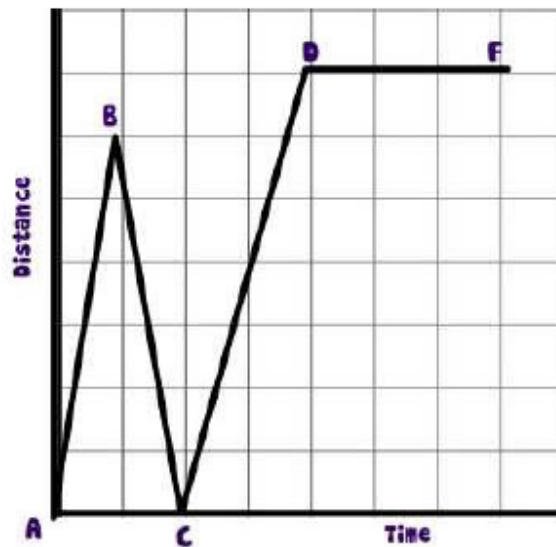
Katie works part-time at the Fallbrook Riding Stable. She makes \$5 an hour for exercising horses and \$10 an hour for cleaning stalls. Because Katie is a full-time student, she cannot work more than 12 hours per week. Graph two inequalities that illustrate how many hours Katie needs to work at each job if she plans to earn not less than \$90 per week.



An airplane is descending to land at the airport. During its decent it has to fly in circles until the landing was cleared of other planes. Explain what is occurring during each of the segments.



Jen left her house and drove to school in the morning, as shown in the accompanying graph. on her drive to school she realized that she forgot her bookbag and had to return home before driving back to school for a 3 hour class. Explain what is happening during each part of the graph.



Given the following set of data, calculate the standard deviation.

2, 4, 4, 4, 5, 5, 7, 9

- a) by hand
- b) on calculators