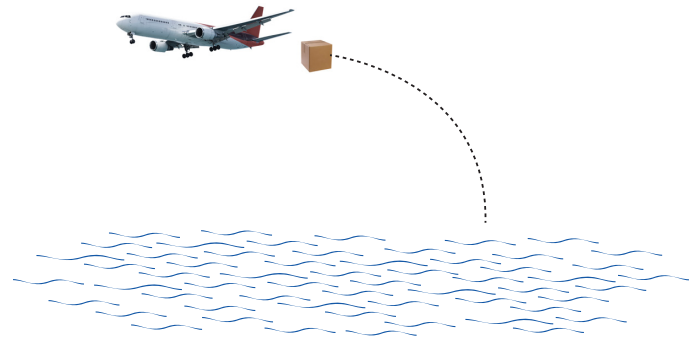


Unit 2: Quadratic Functions Lesson 2.4**Game On!**

1. On the reality TV show *Last Man Standing*, a package is thrown from a plane to the ocean below. The contestants must swim to the package to receive the "free pass" located inside the package. The path that the package follows can be modelled by the quadratic function $d(t) = -4.9t^2 + 10t + 1200$, where d represents the distance, in metres, that the package travels and t is the time in seconds.



3

- a. How long will it take for the package to reach the water?

2

- b. Determine the domain and range of the function.

Domain:

Range:

2. Lacy has \$600 set aside to build a rectangular exercise kennel for her dogs. She will buy fencing material for \$15/ft. Because the side of an existing barn will be used for one of the sides of the kennel, only three sides need to be fenced.

3

- a. Determine the dimensions of the kennel that will enclose the maximum area.

2

b. What area will be enclosed?

/10

You have completed *Lesson 2.4 Game On!*.

Please proceed to the *Unit 2: Quadratic Functions Time Out*, on the next page of this *Workbook*.