

5.8 Quadratics word Problems - Day 1

Ex. 5 A professional stunt performer dives off a tower, which is 21 m high, into the water below. The performer's height, h , in meters, above the water, at t seconds after starting the jump, is given by $h = -4.9t^2 + 21$.

a) How long does it take the performer to reach the halfway point (in terms of height)?



b) How long does it take to reach the water?

c) Compare these times.

Ex. 6 The depth underwater, d , in meters, of Daisy the dolphin during a dive can be modelled by $d = 0.1t^2 - 3.5t + 6$, where t is the time in seconds after the dolphin begins her descent toward the water.

a) How long was daisy underwater?



b) How deep did Daisy Dive?

Ex. 1 The world's largest hedge maze is in the grounds of an English country house known as Longleat. The rectangular maze has 2.7 km of paths flanked by 16 180 yew trees. The length of the rectangle is 60 m more than the width. The area of the maze is 6 496 m². What are the dimensions of the rectangle?

