Helicopters!

Jumping Rivers

Question 1 - Helicopters

a) In teams of 2/3, cut and fold your helicopter into shape.

b) Time your helicopter falling to the ground from the same height as everyone else

c) Enter everyone's results into a **pandas** DataFrame called `heli` with two variables, `length` & `time`.

d) Produce a scatter plot of length against time. What does this tell you?

e) Perform linear regression with the model $time = \beta_0 + \beta_1 \times length$. What is the value of β_1 and what does this tell you about the relationship between the length of the helicopter's blades and the time it takes to reach the ground?

f) Overlay the model line using the fitted values.

g) What is the residual sum of squares for the fitted model?

h) Before we time the helicopter with 14cm blades, use your model to predict how long it will take.