

## Booleans and If Statements: Exercises

**Q1)** Kate's cat, Roary, loves catching moths. Write a program that determines whether or not it is time for Roary catch moths.

Input	Output
moths_in_house = True	Get the moths!
moths_in_house = False	No threats detected.

**Q2)** But Roary can't actually get the moths by herself! Amend the previous program to determine whether or not it is time for Roary to go moth hunting.

Input	Output
moths_in_house = True mitch_is_home = True	Hooman! Help me get the moths!
moths_in_house = False mitch_is_home = False	No threats detected.
moths_in_house = True mitch_is_home = False	Meooooooooooooooooow! Hissssss!
moths_in_house = False mitch_is_home = True	Climb on Mitch.

**Q3)** Write a program that implements the algorithm for Red Light Cameras.

Input	Output
light_colour = "Red" car_detected = False	Do nothing.
light_colour = "Red" car_detected = True	Flash!
light_colour = "Green" car_detected = False	Do nothing.
light_colour = "Green" car_detected = True	Do nothing.
light_colour = "Amber" car_detected = False	Do nothing.
light_colour = "Amber" car_detected = True	Do nothing.

**Q4)** Write a program that asks the user for their height, and determine whether or not they are tall enough to ride the rollercoaster, which has a height requirement of 120cms.

Input	Output
120	Hop on!
50	Sorry, not today :(
191	Hop on!