[LAB2_1] write a program to read weight and height for computing the Body Mass Index (BMI):

BMI = Weight in kilograms / (Height in meters) ²

and then categorize it into underweight (< 18.5), normal weight (18.6 - 24.0), overweight (25.0 -29.9), or obese (>= 30.0) based on the BMI value.

Input

w h indicates weight (kilograms) and height (meters), separating a whitespace where 1.0 < w < 200.0 and 1.0 <= h <= 2.0

Output

print "underweight", "normal weight", "overweight" or "obese" based on the BMI criterion.

Input sample	Output sample
50.0 1.60	normal weight
110.0 1.80	Obese