1. What is a coefficient
   1. Amount of change in x that must be multiplied by to give the change in y
   2. For a 1% increase (unit, not alwaus %) in unauthorised absence from school, GSCE scores drop by -41.2 points
2. What are the assumptions of regression
   1. a linear relationship between the dependent and independent variables
   2. The residuals in your model should be normally distributedHow to you clip (cookie cutter) a raster layer to a study area
   3. No Multicolinearity in the independent variables
   4. Homoscedasticity
   5. Independence of Errors
3. What is homoscedasticity
   1. errors/residuals in the model exhibit constant / homogenous variance
4. What spatial test do we do on the residuals
   1. Moran’s I
5. What does a positive value mean on the residuals
   1. the presence of some spatial autocorrelation could be leading to biased estimates of our parameters and significance values
6. What is a lag model
   1. the value of the dependent variable in one area might be associated with or influenced by the values of that variable in neighbouring zones
   2. GCSE scores in one area are related to GCSE scores in the neighbour
7. What is a error model
   1. the error model is not assuming that neighbouring independent variables are influencing the dependent variable but rather the assumption is of an issue with the specification of the model or the data used
   2. We are basically missing some variable that would assist the model (e.g. in GCSE scores there is no cross boundary interaction but a missing variable). The model is slightly wrong but we don’t know how exactly.
8. What is non-stationarity
   1. the relationships between the dependent and independent variable may not exhibit the same slope coefficient in geographic space
9. Why should you always use a multi-scale GWR
   1. Different independent variables will vary of different spatial scales
10. What are issues with GWR
    1. It often has limited local regression points.
    2. It makes lots of small regression models using neighbors but that can mean a coefficient is made with say 2-7 points.
    3. Means it can overfit = fits the data too well, so it is also modelling the errors
    4. Or can also underfit = doesn’t fit the data well and so it can’t be used to model with new data

