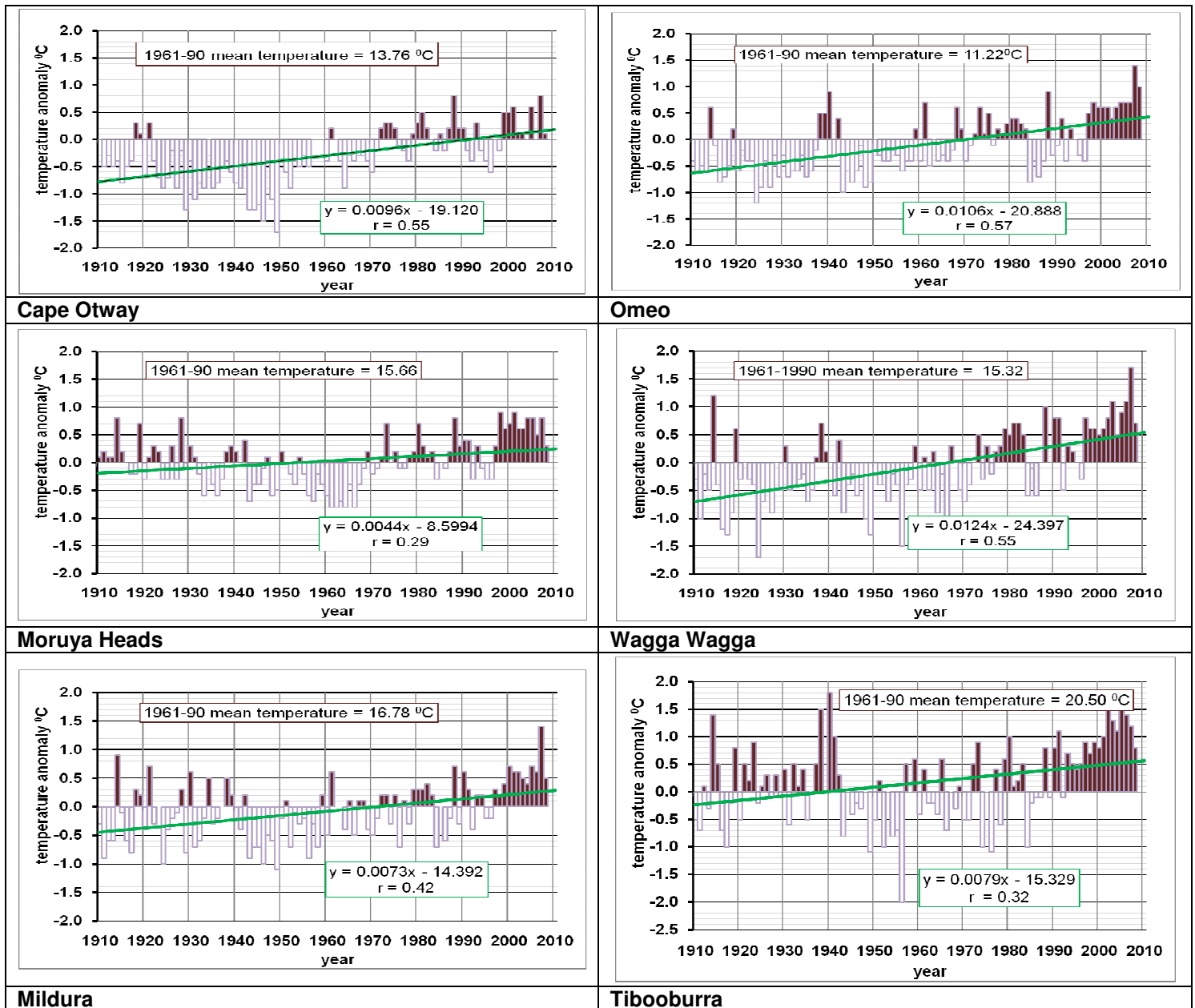


CASE STUDY: Global Warming - the forest from the trees

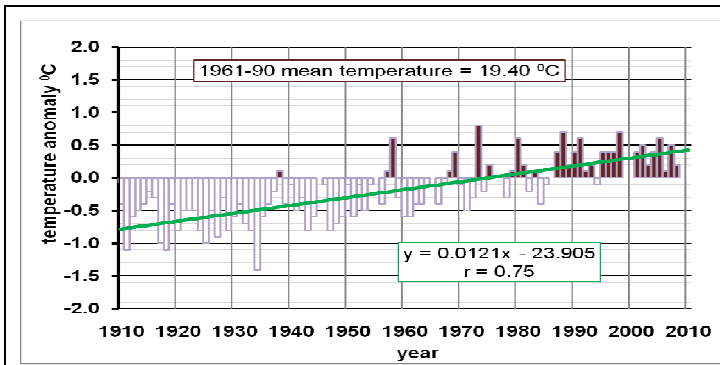
9. Comparison of mean temp anomaly trends for selected rural stations.

ACTIVITY: Comparing linear trends and the goodness of fit to a straight line relationship

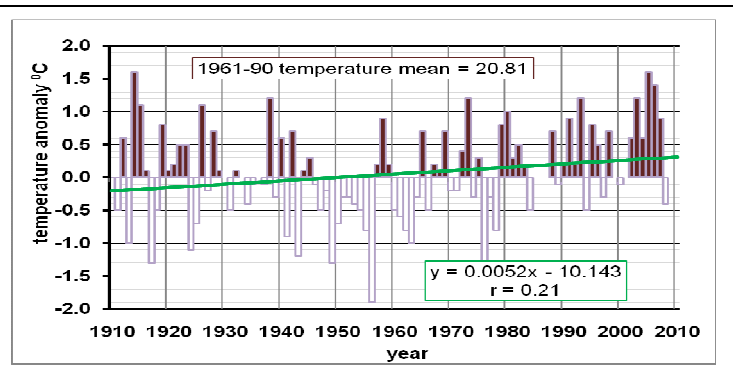
Examine carefully the twelve time-series of mean temperature anomalies from the High Quality Dataset (BOM, 2009 c) on the next two pages and then complete the summary table that follows.



CASE STUDY: Global Warming - the forest from the trees



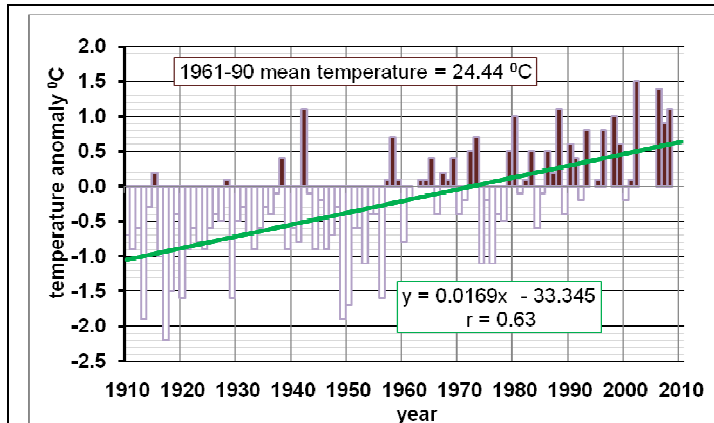
Yamba



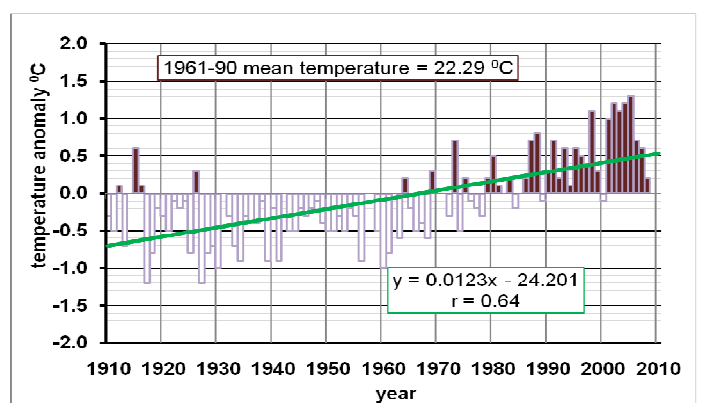
Charleville

CASE STUDY: Global Warming - the forest from the trees

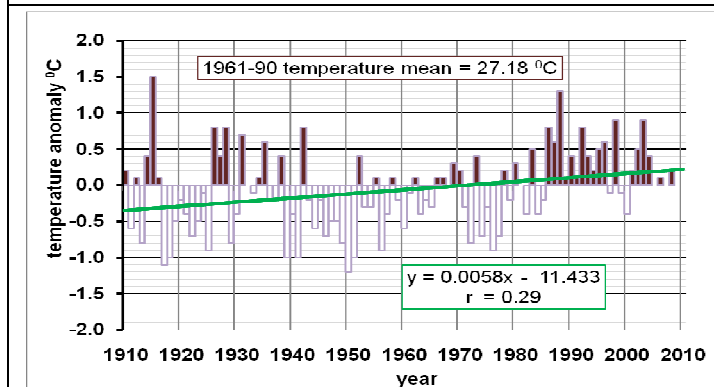
9(b) Comparison continued.



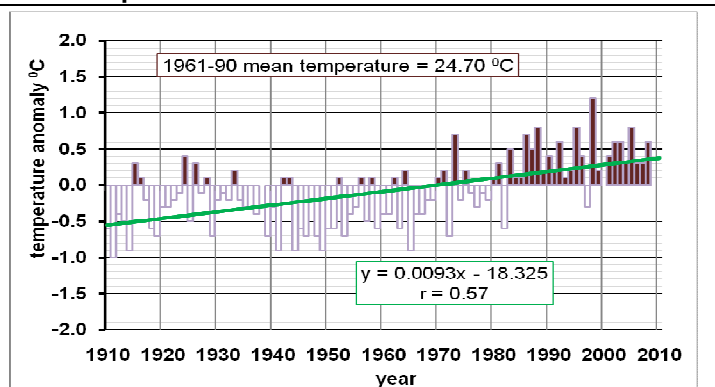
Boulia



Rockhampton



Normanton



Cairns

Now complete the summary table below:

Station	Coefficient of correlation between anomaly and years (r)	Gradient of the line of best fit (°C/year)	Intercept with the y-axis (i.e. T anomaly when x = 1910) (°C)	Predicted T anomaly for when x = 2010 (°C)	Predicted average change per century (1910-2010) (°C)
A. Cape Otway	0.55	0.0096	-0.78	0.18	0.96
C. Omeo	0.57	0.0106	-0.64	0.42	1.06
D. Moruya					
F. Wagga					
G. Mildura					
K. Tibooburra					
L. Yamba					
N. Charleville					
O. Rockhampton					
P. Boulia					
Q. Normanton					
R. Cairns					

QUESTION:

In which of the twelve stations does the relationship between time and mean temperature anomaly most conform to a straight line (hint: look for the Station with the highest correlation coefficient and the least amount of scatter of anomalies about the line-of best fit)? What is the predicted average temperature change per century for this Station?

