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① X and y appear to have similar, if not the same distributions

②

	Min	1 <sup>st</sup> Q	Median	3 <sup>rd</sup> Q	Max	Mean	Variance
X	0.2	1.7	5.3	6.65	9.0	4.591	9.8589
Y	0.1	1.7	4.8	7.9	9.8	4.955	12.51873

Outlier for x:  $(Q_3 - Q_1) * 1.5$

$$(6.65 - 1.7) * 1.5 = 7.425$$

$$1.7 - 7.425 = -5.725$$

$$6.65 + 7.425 = 14.075$$

X has no outliers

Outliers for y:

$$(7.9 - 1.7) * 1.5 = 9.3$$

$$1.7 - 9.3 = -7.6$$

$$7.9 + 9.3 = 17.2$$

Y has no outliers

③  $r = 0.794232$

The linear association is 0.794232 which means it is a strong and positive correlation

④ yes there is an outlier at  $x = 6.2$ ,  $y = 0.1$

The new correlation after removing this point is 0.9359031  
After removing (6.2, 0.1), the correlation is much stronger and also is still positive