Video 12

1. If it were true that two identical twins always had the same height, what would the scatterplot of the heights of several pairs of identical twins look like? What would be the correlation r between the heights?

It would form a straight line. $r = 1$.

2. What are all the possible values of the correlation coefficient r?

$-1 \leq r \leq 1$

3. If heredity plays a strong role in determining personality, will the correlation between twins raised together be about the same as, or much larger than, the correlation between twins raised apart?

It should be similar

4. Is it easy to guess how large the correlation is by looking at a scatterplot? Explain.

it is not easy to guess. Scaling can change the appearance of the strength of a correlation. A strong correlation can look weaker and a weak correlation can look stronger. When two scatterplots are drawn on the same scale, the data that is more spread out will have a lower correlation.