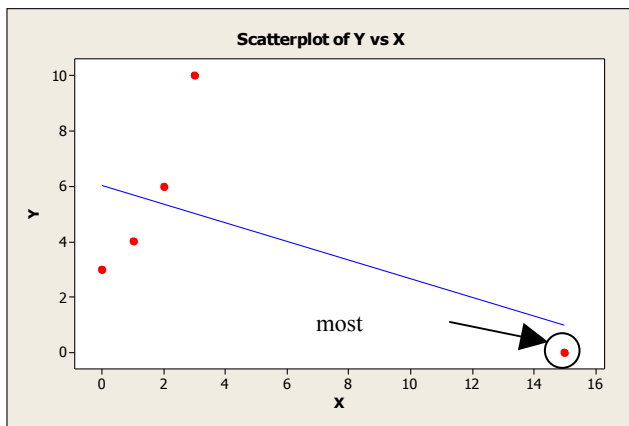


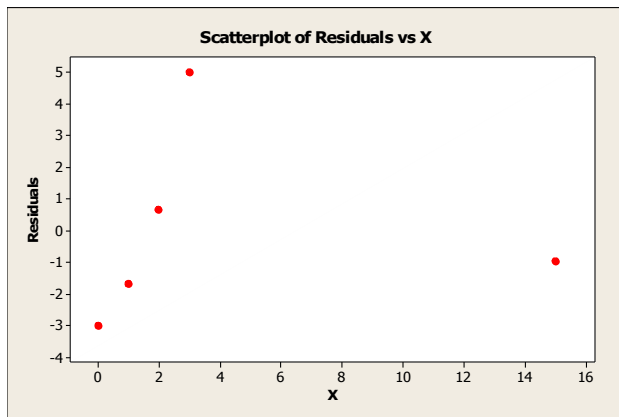
11.



(c) A regression outlier is an observed point which lies outside the overall pattern of the other observations.

(d) The biggest outlier is the point (15, 0)

(e) Residual = $0 - 0.97612 = -0.97612$



(g) The residual plot does not show a random scatter. The influential point must be some kind of mistake for how it deviates from the pattern. A linear model would not be a good fit for this data.

12. (a) slope = $r \frac{s_y}{s_x} = 0.914 \left(\frac{8.14}{4.2} \right) = 1.771$

(b) $r^2 = 0.835$. 83.5% of the variation in height is explained by the linear relationship between the leg bone length and the height of the men.

(c) This is a “good” r-squared value. It indicates that a linear model will predict height fairly well based on leg bone length.

(d) slope = b , and $a = \bar{y} - b\bar{x} = 172.7 - 1.771(45.9) = 91.411$. So the LSRL is

$$(\text{Height}) = 91.411 + 1.771(\text{Leg Bone Length})$$