

① LEAST SQUARES LINE | LINE OF BEST FIT

② D ③ A ④ B ⑤ C

⑭ Negative, as distance increases, chance of of sinking put is less likely

⑮ Zero, no correlation between height and distance from school

⑯ a) $\overset{Zn}{y} = 28.73 \overset{Pb}{x} + 19.54$ $r = 0.941$

b) $\overset{Pb}{y} = 0.031 \overset{Zn}{x} - 0.411$ $r = 0.941$

c) No

d) $Zn = 28.73(2) + 19.54 = \boxed{77 \text{ mg/kg}}$

⑰ $r = 1$

⑱ a) Negative association - Neg. Slope
As Engine Size \uparrow , MPG \downarrow

b) Negative \rightarrow Neg. relationship / Slope

⑲ No, as shark attacks have nothing to do w/ sales tax. Must be another reason \rightarrow increasing population??

⑳ a) $y = -0.545x + 19.358$ $r = -0.968$

b) $S_x = 4.97$ $S_y = 2.80$ $\text{Slope} = r \cdot \frac{S_y}{S_x}$

$\text{Slope} = -0.968 \cdot \frac{2.8}{4.97} = -0.545$

c) $\bar{x} = 18.2$ $\bar{y} = 9.44$

d) $y = -0.545(18.2) + 19.358 = \boxed{9.44}$