

NAME: _____

A2.S.8: Interpret within the linear regression model the value of the correlation coefficient as a measure of the strength of the relationship

1. 060211b, P.I. A2.S.8

A linear regression equation of best fit between a student's attendance and the degree of success in school is $h = 0.5x + 68.5$. The correlation coefficient, r , for these data would be

- [A] $r = 0$ [B] $0 < r < 1$
[C] $-1 < r < 0$ [D] $r = -1$

2. 060109b, P.I. A2.S.8

The relationship of a woman's shoe size and length of a woman's foot, in inches, is given in the accompanying table.

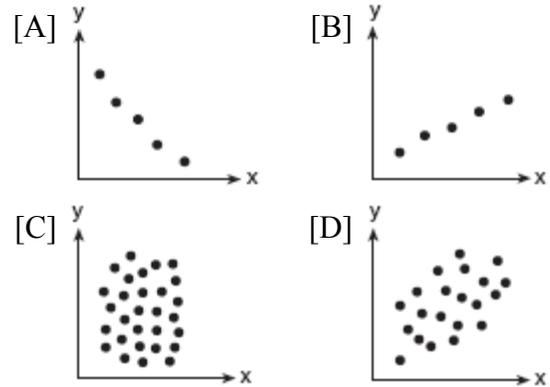
Woman's Shoe Size	5	6	7	8
Foot Length (in)	9.00	9.25	9.50	9.75

The linear correlation coefficient for this relationship is

- [A] 0 [B] 0.5 [C] -1 [D] 1

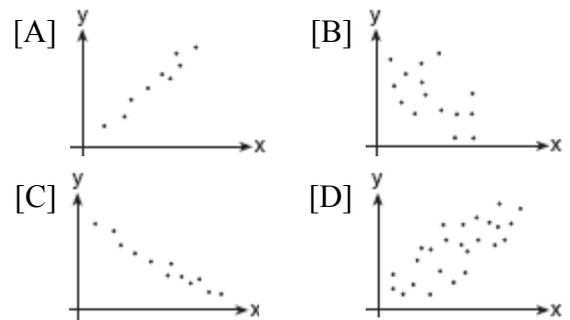
3. 010515b, P.I. A2.S.8

Which scatter diagram shows the strongest positive correlation?



4. 080306b, P.I. A2.S.8

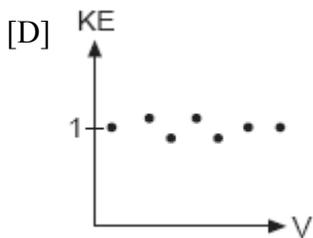
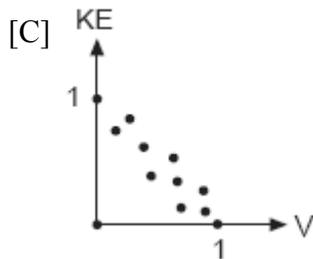
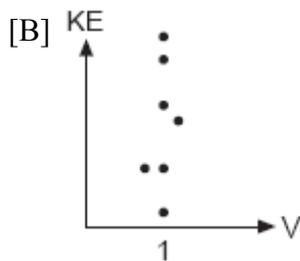
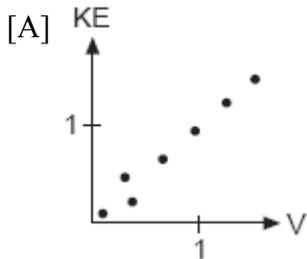
Which graph represents data used in a linear regression that produces a correlation coefficient closest to -1 ?



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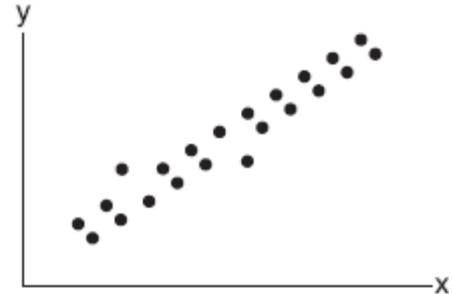
5. 010816b, P.I. A2.S.8

In the physics lab, Thelma determined the kinetic energy, KE , of an object at various velocities, V , and found the linear correlation coefficient between KE and V to be $+0.8$. Which graph shows this relationship?



6. 060705b, P.I. A2.S.8

What could be the approximate value of the correlation coefficient for the accompanying scatter plot?



- [A] -0.85 [B] -0.16 [C] 0.90 [D] 0.21

7. fall9910b, P.I. A2.S.8

The points in the scatter plot below represent the ages of automobiles and their values. Based on this scatter plot, it would be reasonable to conclude:



- [A] Age and value have a coefficient of correlation that is equal to zero.
 [B] Age and value have a coefficient of correlation that is greater than 0.5.
 [C] Age and value have a coefficient of correlation that is less than zero.
 [D] Age and value have a coefficient of correlation that is between zero and 0.5.

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[1] B

[2] D

[3] B

[4] C

[5] A

[6] C

[7] C