Lesson 13.2 Practice: Lines of Best Fit

School Launch · Algebra I · Unit 13: Data and Statistics: Scatter Plots and Lines of Fit · Worksheet A

No calculator

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

1. Describe the association (positive, negative or none) in the data: $(2, -4)$, $(3, -1)$, $(8, 3)$, $(9, 5)$. EASY

2. Describe the association (positive, negative or none) in the data: $(2, -7)$, $(6, -11)$, $(10, -11)$, $(11, -16)$. EASY

3. Describe the association (positive, negative or none) in the data: $(4, 5)$, $(6, 4)$, $(8, 9)$, $(12, 13)$. EASY

4. Find the least-squares line $\hat{y} = a + bx$ (round to 2 decimals) for: $(1, 0)$, $(2, 3)$, $(3, 4)$, $(4, 9)$, $(10, 27)$. MEDIUM

5. Find the least-squares line $\hat{y} = a + bx$ (round to 2 decimals) for: $(1, -2)$, $(2, -3)$, $(4, -6)$, $(7, -11)$, $(12, -14)$. MEDIUM

6. Find the least-squares line $\hat{y} = a + bx$ (round to 2 decimals) for: $(3, -9)$, $(4, -9)$, $(5, -12)$, $(7, -14)$, $(10, -15)$. MEDIUM

7. Find the least-squares line $\hat{y} = a + bx$ (round to 2 decimals) for: $(1, 11)$, $(5, 25)$, $(6, 28)$, $(10, 39)$, $(11, 44)$. MEDIUM

8. Find the least-squares line $\hat{y} = a + bx$ (round to 2 decimals) for: $(1, 12)$, $(2, 13)$, $(4, 23)$, $(6, 28)$, $(8, 35)$, $(12, 43)$. HARD

9. Find the least-squares line $\hat{y} = a + bx$ (round to 2 decimals) for: $(2, 7)$, $(3, 10)$, $(5, 16)$, $(6, 16)$, $(7, 21)$, $(9, 29)$. HARD

10. Find the least-squares line $\hat{y} = a + bx$ (round to 2 decimals) for: $(4, 21)$, $(6, 25)$, $(8, 28)$, $(10, 33)$, $(11, 34)$, $(12, 37)$. HARD