Variation – Day 3   Name_____
Assignment   Date_____Period_____

For each table find the constant of variation and corresponding equation.

1.

x	2	4	6
y	12	6	4

k = _____   Equation _____

2.

x	2	3	4
y	18	12	9

k = _____   Equation _____

Tell whether each illustrates an inverse variation. If yes, why?

3. The number of times one must stop for gas on a long trip, and the number of gallons the car's tank holds

                                                                    3._____

4. Electrical power used by a city, and the number of people who live in that city.

                                                                    4._____

5. Time to fill a bathtub, and water flow rate.   5._____

Find the constant of variation (k) for each. Assume y varies _inversely_ with x.

6. y = 5 when x = 7   6._____

7. y = 2 when x = 6   7._____

8. y = –3 when x = –4   8._____

Solve. Assume y varies inversely with x.

9.   If x = 2.4 when y = 1.2, find y when x = 3.5.   9._____

10. If x = 4 when y = 2.5, find x when y = 10.   10._____

11. If y = 27 when x = 12, find x when y = –12.   11._____

12. If y = 60 when x = 2, find x when y = 12.   12._____

13. In sound and harmonics, the frequency of a vibrating string varies inversely to its length. A guitar string 20 inches long vibrates at a frequency of 400 cycles per second. Find the frequency of a 35-inch string.

13._____

14. Traveling time from San Antonio to Dallas varies inversely with speed. If there are 278 miles between San Antonio and Dallas, how fast would you have to travel to make the trip in 4 hours?

14._____