

Name: _____

Date: _____

Hour: _____

Homework 1.1 – Representing Number Patterns

1.) If each of the teams A, B, C, D, and E play each other, one of the games will be A verse B. List all of the games, and tell how many there are.

2.) In 1993, after Penn State joined the Big Ten athletic conference, the Big Ten had 11 teams. If each of the 11 teams played each of the other teams, how many teams would there be? Make a table.

3.) If an athletic conference had 12 teams and each of the teams played the other teams, how many games will there be?

Find the next three terms in each sequence. Then explain the pattern used to find the terms for each.

4.) 4, 9, 14, 19, 24, _____, _____, _____. Pattern: _____

5.) 7, 16, 25, 34, 43, _____, _____, _____. Pattern: _____

6.) 9, 19, 29, 39, 49, _____, _____, _____. Pattern: _____

7.) 2, 4, 8, 16, 32, _____, _____, _____. Pattern: _____

8.) 5, 7, 9, 11, 13, _____, _____, _____. Pattern: _____

9.) 3, 9, 27, 81, 243, _____, _____, _____. Pattern: _____

10.) 8, 10, 12, 14, 16, _____, _____, _____. Pattern: _____

11.) 16, 8, 4, 2, 1, _____, _____, _____. Pattern: _____

12.) 5, 12, 19, 26, 33, _____, _____, _____. Pattern: _____

13.) Suppose 8 cities are to be linked by phone lines, with 1 phone line between each pair of cities. How many phone lines will there be?

David and his three friends collected 196 aluminum cans.

14.) They divide the cans among themselves equally into 4 bags. How many cans are in each bag?

15.) The four friends take the cans to the recycling center where they each get \$ 0.20 a pound for the cans. The total weight of the cans is 9 pounds. How much money will they get all together?

16.) How much money will each of the 4 friends get from recycling the cans if they split the money equally?

17.) If a teacher collects \$2.75 from each of her students for a field trip, how much will the teacher collect?

18.) The citywide concert sold 6702 tickets to students and 3749 tickets to parents. How many tickets were sold all together?

19.) **Geometry:** What is the area of a square, if one side is 23 centimeters long?

20.) What are 3 fractions that are equivalent to $\frac{3}{5}$?

Find the value of the following expressions.

21.) $6(9 + 4)$

22.) $\sqrt{225}$

23.) Kim had \$4.75 and spent \$3.12. How much does she have left?

