



Warm-Up 5

61. _____ cubes It takes 6 cubes to build a staircase containing 3 rows. How many cubes are needed to build a staircase that contains 11 rows?



62. _____ cm^2



Three congruent, coplanar circles overlap so that each center lies on the other two circles. The diameter of each circle is 8 cm. What is the area of the triangle formed by connecting the centers of the circles? Express your answer in simplest radical form.

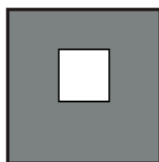
63. _____ What is the next number in the geometric sequence: $-1, 4, -16, 64, \dots$?

64. _____ units The centers of three congruent small circles are collinear, and their diameters form the diameter of the large circle, shown, whose area is 81π units². What is the circumference of one of the smaller circles? Express your answer in terms of π .



65. _____ If $2x + 3 = 4$, what is the value of $12x + 18$?

66. _____ regions



In the figure shown, what is the greatest number of nonoverlapping regions into which the shaded region can be divided with exactly two lines?

67. _____ years Sal collected data on all her family members who were born in the last half of the 20th century. Their birth years are shown in the stem-and-leaf plot. What is the positive difference between the median and the mode of these data?

| | | |
|-----|---------------------------|-------------------|
| 195 | 4 4 7 9 | |
| 196 | 0 2 3 3 4 4 5 5 6 7 8 8 9 | |
| 197 | 0 0 4 4 4 4 8 9 | |
| 198 | 1 6 | |
| 199 | 2 4 5 7 | Key: 195 4 = 1954 |

68. _____ minutes In a game that lasts 48 minutes, exactly 6 players from each team are on the field at all times. Throughout the game, players are substituted so that 8 players on a team each play an equal amount of time. How many minutes is each of the 8 players on the field during the game?

69. _____ leaps A dog is chasing a rabbit that has a head start of 150 ft. If their leaps are synchronized, and the dog leaps 9 ft every time the rabbit leaps 7 ft, in how many leaps will the dog catch up to the rabbit?



70. _____ For a certain set of five numbers, the mean of all but the largest number is 80, and the mean of all but the smallest number is 90. What is the range of the set of five numbers?