

1. An equilateral triangular region of side length 2 cm is cut from a corner of an equilateral triangular region with side length 6 cm. What is the number of centimeters in the perimeter of the resulting trapezoid?

1. _____

2. An investment of \$10,000 is made in a government bond that will pay 6% interest compounded annually. At the end of five years, what is the total number of dollars in this investment? Express your answer to the nearest whole number.

2. _____

3. Washington, D.C. has a land area of 68 square miles and a population of 570,000. What is the number of people per square mile in Washington, D.C., rounded to the nearest hundred?

3. _____

4. A large cube is constructed from individual unit cubes and then dipped into paint. Thereafter, it is disassembled into the original unit cubes; 486 of these have exactly one face painted. How many unit cubes were used to construct the large cube?

4. _____

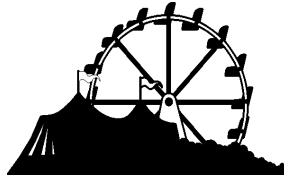
5. The Pittsburgh Stadium Authority passed a resolution that there must be one restroom for every 70 women attending a game. At a sellout game, at most 42% of the 52,000 attendees are women. How many restrooms are necessary?

5. _____

6. How many of the natural numbers from 1 to 600, inclusive, contain the digit 5 at least once? (The numbers 152 and 553 are two natural numbers that contain the digit 5 at least once, but 430 is not.)

6. _____

7. A ferris wheel with radius 90 feet makes a complete circuit every 7 minutes. To the nearest tenth, how fast is a person in a seat traveling in feet per minute?



7. _____

8. At the Word Store, each vowel sells for a different price, but all consonants are free. The word “triangle” sells for \$6, “square” sells for \$9, “pentagon” sells for \$7, “cube” sells for \$7 and “tetrahedron” sells for \$8. What is the dollar cost of the word “octahedron”?

8. _____