Math 213 T/F Practice Problems for Exam 2

True & False: Determine if each of the following is true or false. In each case, explain your answer in detail or correct the question if it is false. For both true and for false answers, try to create / find a similar question from class notes / texts to practice the stated (or corrected) techniques or ideas.

1.   T   F   If two triangles have the same perimeter, they must have the same area.

2.   T   F   If two squares have the same perimeter, they must have the same area.

3.   T   F   The diagonals of a square intersect at right angles.

4.   T   F   The volume of a cylinder is 3 times the volume of a cone with the same base and height.

5.   T   F   If the height of a triangle doubles, then its perimeter increases by a factor of 4

6.   T   F   A mile is longer than a kilometer.

7.   T   F   An inch is longer than a centimeter.

8.   T   F   A yard is longer than a meter.

9.   T   F   If the radius of circle doubles then the area increases by a factor of 4.

10.   T   F   If the height of a cylinder doubles, then the volume of the cylinder increases by a factor of 8.

11.   T   F   If the surface area of two cylinders is the same, then the cylinders have the same volume.

12.   T   F   50° C is warmer than 50° F.

13.   T   F   If the length of the diagonal of a square is doubled, then the edge lengths are doubled.

14.   T   F   A cube of with side length 10cm would fit inside of a sphere with diameter 10cm.

15.   T   F   1500 km is longer than 1200 miles.

16.   T   F   If the surface area of two spheres is the same, then the volume of the spheres must be the same.

17.   T   F   If the edges of a cube all double, then the volume of the cube increases by a factor of 8.

18.   T   F   100 miles/hour is faster than 100 km/hour.

19.   T   F   4 pints = 128 ounces

20.   T   F   If the length of the diagonal of a square is halved, so are the edge lengths.

21.   T   F   All parallelograms with the same perimeter have the same area.

22.   T   F   If the height of a cone doubles, and the base remains the same, the volume of the cone doubles.

23.   T   F   All connected sets of six squares are nets for a cube

24.   T   F   To compute the area of a regular n-gon, divide the n-gon into n equilateral triangles, find the area of the equilateral triangle and multiply that area by n.

25.   T   F   The surface area of a prism is always less (disregarding units) than the volume of a prism.

26.   T   F   There are 27 cubic feet in one cubic yard.

27.   T   F   One square meter is the same as 100 square centimeters.

28.   T   F   The Pythagorean Theorem is not important for this class.

Answers

1. F	16. T
2. T	17. T
3. T	18. T
4. T	19. F
5. F	20. T
6. T	21. F
7. T	22. T
8. F	23. F
9. T	24. F
10. F	25. F
11. F	26. T
12. T	27. F
13. T	28. F
14. F	
15. F	