

Name _____
Mr. Schlansky

Date _____
Geometry

Density

1. Farmer John has a farm with a chicken pen in it. The chicken pen is rectangular measuring 5 yards by 7 yards. If there are 48 chickens in the pen, what is the population density to the nearest tenth of a chicken?

2. Jennifer is having her Sweet 16 party on a giant circular patio that has a radius of 7.2 meters. If there are 83 people at the party, to the nearest tenth, what is the population density?

3. For a music festival, a stage was built in the shape of a right triangle whose sides measure 6 yards, 8 yards, and 10 yards. At the end of the concert, all of the performers came out and performed together. There were a total of 62 performers on the stage. To the nearest tenth of a person, what was the population density on the stage?

4. Town A has an area of 12 square miles. Town B has an area of 10 square miles. If town A has a population of 8,198 people and town B has a population of 7,384 people, which town has a greater population density? Justify your answer.

5. A brick that weighs 1824 grams has dimensions that measure 4 cm by 3 cm by 8 cm. To the nearest tenth, what is the density of the brick?

6. A cylindrical candleholder has a diameter of 4.5 cm and a height of 20 cm. If the candleholder has a mass of 2900 g, rounded to the nearest whole number, what is its density?

7. What is the density of a solid sphere of clay that has a diameter of 3.2 inches and has a mass of 552 grams? Round your answer to the nearest tenth.

8. A wooden cube has an edge length of 6 centimeters and a mass of 137.8 grams. Determine the density of the cube, to the *nearest thousandth*. State which type of wood the cube is made of, using the density table below.

Type of Wood	Density (g/cm ³)
Pine	0.373
Hemlock	0.431
Elm	0.554
Birch	0.601
Ash	0.638
Maple	0.676
Oak	0.711