

## Units

While driving with his father, Amit holds his breath whenever they pass through a particular tunnel. Amit counts the number of seconds he holds his breath, from the beginning of the tunnel to the end of the tunnel, and finds that he holds his breath, on average, for about 8 seconds (sec). If his father drives the car at 60 miles per hour through the tunnel, according to the average time Amit holds his breath, about how long is the tunnel?

*Note: There are 5280 feet (ft) in 1 mile.*

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- A 90 ft
- 
- B 700 ft
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- C 750 ft
- 
- D 800 ft
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Client	Bone area (cm <sup>2</sup> )	Bone mineral content (g)
Person 1	2,160	2,520
Person 2	2,400	3,010
Person 3	1,800	1,980
Person 4	2,050	2,460

The table at left gives the total bone area, in square centimeters (cm<sup>2</sup>), and bone mineral content, in grams (g), of four healthy people. Bone mineral density is the unit rate of grams of bone mineral content per square centimeter of bone area. Which person has the greatest bone mineral density, in grams per square centimeter?

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- A Person 1
- 
- B Person 2
- 
- C Person 3
- 
- D Person 4
- 

A grocery store normally sells lemonade for \$3.50 per bottle. The grocery store is currently having a sale on lemonade which advertises 6 bottles for only \$13.50. How much cheaper is the lemonade on sale per bottle compared to the normal price per bottle?

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- A \$0.75
- 
- B \$1.25
- 
- C \$1.75
- 
- D \$2.25
-

## Units

João is looking for an apartment to live in. He finds four available apartments. He then records the monthly rent and the size of each apartment in a table, as seen below. Based on the information in the table, which apartment has the highest cost per square foot ( $\text{ft}^2$ )?

Apartments	Rent in dollars	Size in square feet
Branton Ave.	\$500	400 $\text{ft}^2$
Dobbs St.	\$600	450 $\text{ft}^2$
St. Claire Rd.	\$750	500 $\text{ft}^2$
Woodwick Dr.	\$800	550 $\text{ft}^2$

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A Branton Ave.

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B Dobbs St.

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C St. Claire Rd.

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D Woodwick Dr.

The strength of a magnetic field is measured in teslas. One tesla is equal to one weber per square meter, as follows:

$$1 \text{ T} = 1 \frac{\text{Wb}}{\text{m}^2}$$

Divya is building a circuit for her physics class. Point  $P$  on one of her wires has a magnetic field strength of  $6 \cdot 10^6$  webers per square megameter, where 1 megameter is equal to  $10^6$  meters. What is the magnetic field strength in teslas?

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A  $6 \cdot 10^{-6}$  teslas

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B  $6 \cdot 10^0$  teslas

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C  $6 \cdot 10^{12}$  teslas

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D  $6 \cdot 10^{18}$  teslas

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