Giantburgers

This headline appeared in a newspaper.

![Image of a burger]

Every day 7% of Americans eat at Giantburger restaurants

Decide whether this headline is true using the following information.

- There are about $8 \times 10^3$ Giantburger restaurants in America. $8,000$
- Each restaurant serves about $2.5 \times 10^3$ people every day. $2,500$
- There are about $3 \times 10^8$ Americans. $300,000,000$

Explain your reasons and show clearly how you figured it out.

$8,000 \cdot 2,500 = 20,000,000$ people eat every day

$7\%$ of $300,000,000 = 21,000,000$

The headline is close to true. The number of people that actually eat at the restaurant and the estimated number are close.
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![Hamburger Icon]

**Every day 7% of Americans eat at Giantburger restaurants**

Decide whether this headline is true using the following information.

- There are about $8 \times 10^3$ Giantburger restaurants in America. 8000
- Each restaurant serves about $2.5 \times 10^3$ people every day. 2500
- There are about $3 \times 10^8$ Americans. 300,000,000

The headline is false, because the actual % is 6.67% of Americans.

$8 \times 10^3 = 8000$ restaurants, and $2.5 \times 10^3 = 2500$ people @ ea. restaurant.

Thus, about $200,000,000$ people go to restaurants a day. $3 \times 10^8 = 300$ million people (Americans). That means that 2 million out of 300 million people eat at Giantburger restaurants, which $\approx 0.67\%$, not 7%.
Every day 7% of Americans eat at Giantburger restaurants

Decide whether this headline is true using the following information.

- There are about $8 \times 10^3$ Giantburger restaurants in America.
- Each restaurant serves about $2.5 \times 10^3$ people every day.
- There are about $3 \times 10^8$ Americans.

Explain your reasons and show clearly how you figured it out.

To figure out how many people Giantburger serves per day, you would multiply $8 \times 10^3$ by $2.5 \times 10^3$, totaling 20,000,000.

Then you divide that number by how many Americans there are, $3 \times 10^8$, or 300,000,000.

So, $20,000,000 \div 300,000,000 = 0.066$. If you rounded to 0.067 or 0.07, the statement is correct.
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Explain your reasons and show clearly how you figured it out.

\[
\begin{align*}
3 \times 10^8 &= 300,000,000 \\
8 \times 10^3 &= 8000 \\
2.5 \times 10^3 &= 2500 \\
\hline
20,000,000 &= 6.66667 \times 10^6 \\
300,000,000 &= 6.7\%
\end{align*}
\]
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\[
\frac{(8 \times 10^3)(2.5 \times 10^3)}{2 \times 10^6} = \frac{2}{30} = 0.067 
\]

It's true