

QUESTION:

a 10 in pizza is cut into 8 slices. How many square inches of topping does Janelle consume if she has just one slice?

SOLUTION:

The area of a pizza is $S_{pizza} = \pi r_{pizza}^2 = \frac{\pi d_{pizza}^2}{4}$, here $d_{pizza}=10$ inches.

The pizza is cut into 8 slices, hence the area of one slice is

$$S_{slice} = \frac{S_{pizza}}{8} = \frac{\pi d_{pizza}^2}{32}$$

$$S_{slice} = \frac{3.14 \cdot 10^2}{32} = 9.8 \text{ square inches}$$

So Jane consume one slice, or 9.8 square inches of pizza.

ANSWER:

9.8 square inches