

The population of Bangladesh is about  $1.5 \times 10^8$  people. The area of Bangladesh is about  $5 \times 10^4$  square miles. If population density is found by dividing the population of a country by its area, what is the approximate population density of Bangladesh per square mile? Find the quotient, express it in scientific notation, and then fill in the missing number.

$$\frac{1.5 \times 10^8}{5 \times 10^4} = 3 \times 10^?$$