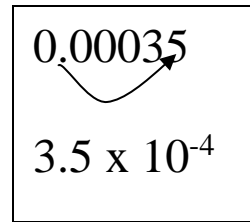
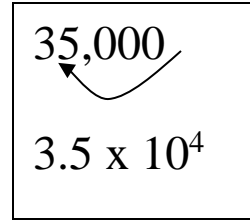


Two-dimensional and Three-dimensional Figures

Scientific Notation

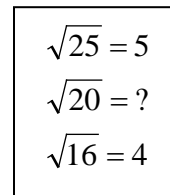
1. Standard to Scientific Notation (Number greater than 1)
 - a. Count the number of place locations to the right of the first number. (i.e. 35,000 has four place locations after 3)
 - b. Create the first factor with a single digit + decimal + remaining non-zero numbers. (i.e. 3.5)
 - c. Multiply first factor by 10 raised to the positive number of place locations. (i.e. 3.5×10^4)
2. Standard to Scientific Notation (Number less than 1)
 - a. Count the number of place locations to the right of the decimal to create a single digit + decimal. (i.e. 0.00035)
 - b. Create the first factor with a single digit + decimal (i.e. 3.5)
 - c. Multiply first factor by 10 raised to the negative number of place locations 3.5×10^{-4}
3. Scientific Notation to Standard (Number greater than 1)
 - a. Move the decimal to the right by the number of the exponent. (i.e. $3.5 \times 10^4 \rightarrow 35_ _ _$)
 - b. Fill the gaps with zeros (i.e. 35,000)
4. Scientific Notation to Standard (Small)
 - a. Move the decimal to the left by the number of the exponent. (i.e. $3.5 \times 10^{-4} \rightarrow 0._ _ _ 35$)
 - b. Fill the gaps with zeros (i.e. 0.00035)



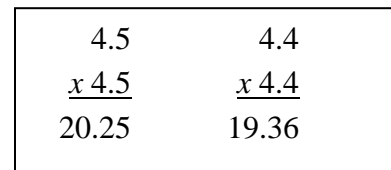
Estimating Irrational Numbers (Square Roots)

What is the $\sqrt{20}$?

1. Find the perfect squares of the numbers less than and greater than the number.
2. Guess an estimate between the two squares. (*hint: picking a number that is close to the desire would require less calculations*).



Pick the number that is the closest to the result (i.e. 20.25 is closer to 20 than 19.36; therefore 4.5 is the best estimate.)



Another approach

1. Find the difference between the perfect squares ($25 - 16 = 9$)
2. Find the difference between the number and the lowest perfect square ($20 - 16 = 4$)