## EVALUATE FORMULAS FOR GIVEN INPUT VALUES IN ORDER TO CALCULATE CIRCUMFERENCE, AREA, VOLUME, DISTANCE, AND TEMPERATURE

## What Is Evaluating Formulas for Given Input Values?

- There are a variety of formulas for calculating measurements, for instance, the formula for calculating the area of a rectangle is length times width or $\mathbf{A}=\mathbf{I} \times \mathbf{w}$.
- The formulas contain places for inputting numbers

o Area of a rectangle $\rightarrow \mathbf{I} \times \mathbf{w}$
o Area of a triangle $\rightarrow \mathbf{1 / 2} \mathbf{b} \times h$
o Volume of rectangular solid $\rightarrow \mathbf{I} \times \mathbf{w} \times \mathbf{h}$
- Input the values and perform the operation
o Circumference of a circle $\rightarrow \boldsymbol{\Pi}^{*} \mathbf{D}(\boldsymbol{\pi}=3.14$ and $\mathbf{D}=8$ in)
- $C=3.14 \times 8=25.12 \mathrm{in}$

0 Area of a rectangle $\rightarrow \mid \times \mathbf{w}(I=4$ in and $\mathbf{w}=7$ in)

- $A=4 \times 7=28$ sq. in
o Area of a triangle $\rightarrow \mathbf{1 / 2} \mathbf{b} \times \mathbf{h}(\mathbf{b}=\mathbf{6}$ inches and $\mathbf{h}=\mathbf{1 2} \mathbf{i n})$
- $A=1 / 2(6 \times 12)=36$

- Distances can be measured in standard measure: inches, feet, yards, miles or in metric measure: millimeters, centimeters, meters, kilometers

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o 12 in = 1 foot
o \(3 \mathbf{f t}=1 \mathbf{y d}\)
o \(5280 \mathbf{f t}=1 \mathbf{m i l e}\)
o \(1000 \mathrm{~mm}=1 \mathrm{~m}\)
o \(100 \mathrm{~cm}=1 \mathrm{~m}\)
o \(100 \mathrm{~m}=1 \mathrm{~km}\)
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- The formulas for measuring are used correctly by inputting the known values and completing the operations.


## Try This!

What is the circumference of a circle with a diameter of 23 ?


What is the volume of a rectangular solid which measures 4 cm by 8 cm by 12 cm ?


