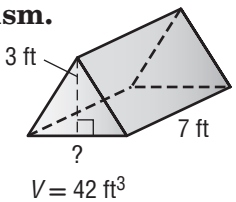
NAME _____ DATE _____ PERIOD _____

Enrich

Missing Dimensions

To find a missing dimension in a triangular prism, you will solve one or two equations.

Example **Find the missing dimension in the triangular prism.**



$V = 42$ ft^3

$V = Bh$	Write the formula for volume of a triangular prism.
$42 = B(7)$	Replace V with 42 and h with 7.
$6 = B$	Divide both sides by 7.

The area of the base is 6 square feet. Use this to solve for the base of the triangle.

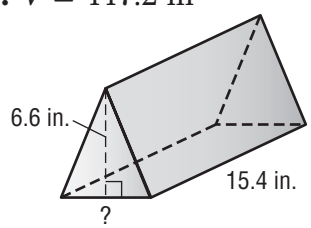
$A = \frac{1}{2}bh$	Write the formula for area of a triangle.
$6 = \frac{1}{2}b(3)$	Replace A with 6 and h with 3.
$12 = b(3)$	Multiply both sides by 2.
$4 = b$	Divide both sides by 3.

The missing dimension is 4 feet.

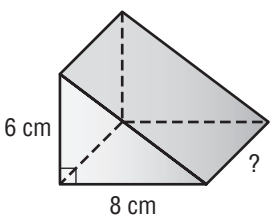
Find the missing dimension in the triangular prism. Round to the nearest tenth if necessary. Then choose the correct letter for the numerical part of the missing dimension from the chart. The letters, in order, will complete the sentence at the bottom of the page.

B 6	**A** 18	**R** 14	**D** 9
S 7	**O** 3	**M** 12	**U** 4
E 4.4	**F** 21	**C** 8.8	**P** 2
I 5	**Y** 16.8	**L** 20	**H** 1

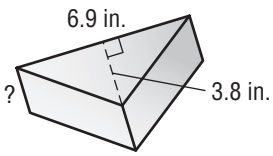
1. $V = 447.2$ in^3



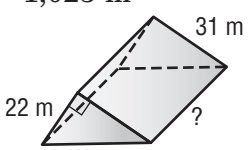
2. $V = 96$ cm^3



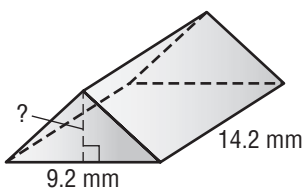
3. $V = 78.7$ in^3



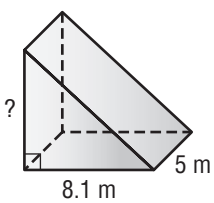
4. $V = 1{,}023$ m^3



5. $V = 326.6$ mm^3



6. $V = 182.3$ m^3



A name for a special rectangular prism is: _____ _____ _____ _____ _____ _____.