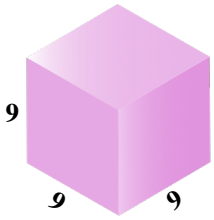
Geometry Problems

Volume and Surface Area of Simple 3D Shapes
Cubes and Rectangular Prisms
Math Worksheet 43

Name: _____

Answer the following. Show your solutions.

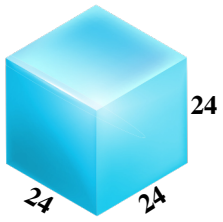
Find the volume of this solid in cubic inches. Dimensions are in feet.



$V = s^3$
$= (9)^3$
$= 729\ ft^3$
convert ft to in
1 ft = 12 in
$1\ ft^3 = 1728\ in^3$
$729 \times 1728 = 1259712$

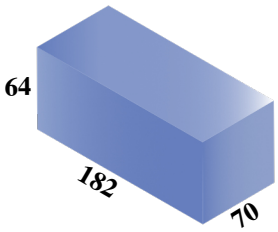
1259712 in³
Volume

Solve for the surface area of this cube in millimeters. Dimensions are in centimeters.



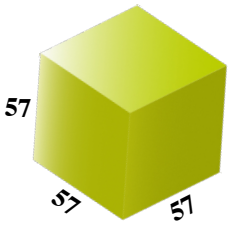
Surface Area

What is the volume of this rectangular prism in meters? Dimensions are in feet.



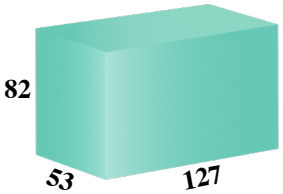
Volume

Express the volume of this solid in cubic feet. Dimensions are in inches.



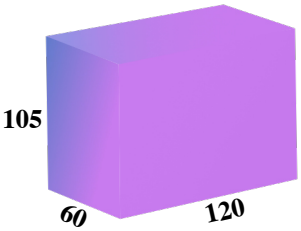
Volume

Express the surface area of the rectangular box below in centimeters. Dimensions are in meters.



Surface Area

Calculate the volume of this rectangular solid in feet. Dimensions are in yards.



Volume

Geometry Problems
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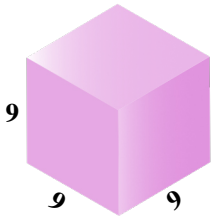
Name: **ANSWER KEY**

Answer the following. Show your solutions.

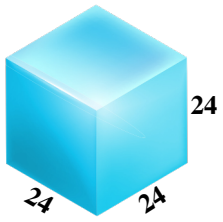
Find the volume of this solid in cubic inches. Dimensions are in feet.



$V = s^3$
$= (9)^3$
$= 729\ ft^3$
convert ft to in
1 ft = 12 in
$1\ ft^3 = 1728\ in^3$
729 x 1728 = 1259712

1259712 in^3
Volume

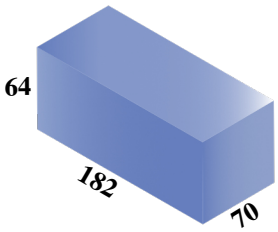
Solve for the surface area of this cube in millimeters. Dimensions are in centimeters.



$S = 6s^2$
$= 6\ (24)^2$
$= 3456\ cm^2$
convert cm to mm
1 cm = 10 mm
$1\ cm^2 = 100\ mm^2$
3456 x 100 = 345600

345600 mm^2
Surface Area

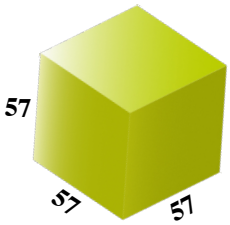
What is the volume of this rectangular prism in meters? Dimensions are in feet.



V = l x w x h
= 182 x 70 x 64
$= 815360\ ft^3$
convert ft to m
1 m = 3.28 ft
$1\ m^3 = 35.29\ ft^3$
815360 ÷ 35.29
= 23104.56

23104.56 m^3
Volume

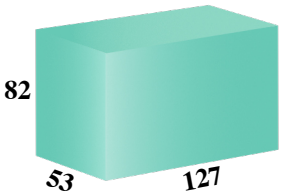
Express the volume of this solid in cubic feet. Dimensions are in inches.



$V = s^3$
$= (57)^3$
$= 185193\ in^3$
convert in to ft
12 in = 1 ft
$1728\ in^3 = 1\ ft^3$
185193 ÷ 1728 = 107.17

107.17 ft^3
Volume

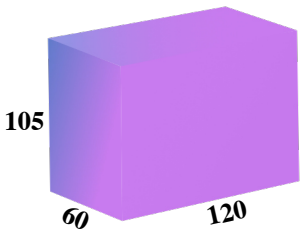
Express the surface area of the rectangular box below in centimeters. Dimensions are in meters.



S = 2 (wl+lh+hw)
= 2 [(53)(127)+(127)(82)
+(82)(53)]
= 2 [6731+10414+4346]
$= 42982\ m^2$
convert m to cm
1 m = 100 cm
$1\ m^2 = 10000\ cm^2$
42982 x 10000 = 429820000

429820000 cm^2
Surface Area

Calculate the volume of this rectangular solid in feet. Dimensions are in yards.



V = l x w x h
= 120 x 60 x 105
$= 756000\ ft^3$
convert ft to yd
1 yd = 3 ft
$1\ yd^3 = 27\ ft^3$
756000 x 27 = 20412000

20412000 ft^3
Volume