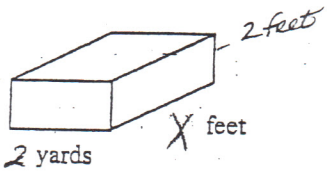
January
Math Bowl - Volume

1. If the volume of the box is 96ft³, what is X in feet?

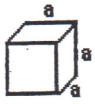


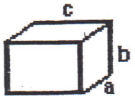

$96 = 6 \times 2 \times X$

$\frac{96}{12} = X$

$8 = X$

**<u>Volume</u> is the amount of 3-dimensional space something takes up. Volume is measured in cubic units like in³ or cm³.**

cube = $a^3$ 


rectangular prism = a b c 

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Name:_____

**Assignments:**
Go to the following website and use the information to help you solve the following problems:
http://regentsprep.org/Regents/Math/fsolid/Solids.htm

1. Find the volume of a square with the following dimensions:
   Length = 5 inches
   Width = 4 inches
   Height = 3inches

Answer: 60 cubic inches or 60 $in^3$

2. Find the volume of a cylinder with the following dimensions:
   Radius = 13 cm
   Height = 28 cm
   Express in terms of π.

Answer: 4732 π

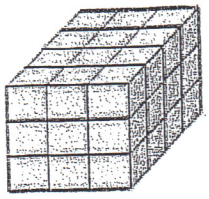
3. Find the volume of a box with the following dimensions:
   length = 3 feet
   width = 1 foot
   height = 1 1/3 yd. = 4 ft

3 x 1 x 4

Answer: 12 $ft^3$

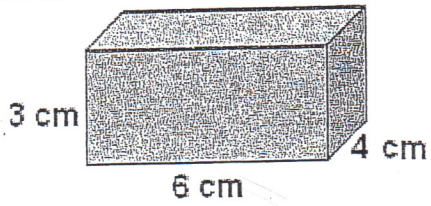
Question 4

Find the volume of the figure shown below.



(A.) 36 cubic units  B. 9 cubic units
C. 12 cubic units  D. 24 cubic units

5. Find the volume of the figure shown below.




A. 24 $cm^3$  (B.) 72 $cm^3$
C. 13 $cm^3$  D. 81 $cm^3$

Question 6

What is the volume of a cube that has an edge of 5 feet?

A. 15 cubic feet  B. 150 cubic feet
(C.) 125 cubic feet  D. 25 cubic feet

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Score:

Green Bay West High Elementary Math Bowl
May 12, 2011

Name: _____ School: _____

Team Number: _____

## Event 3: Random Hat

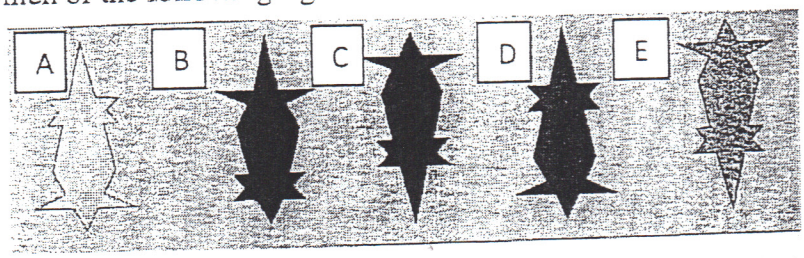
1. There are 13 apples in a basket, you pick up 8 of them, but as you are walking you drop 3 apples. How many apples are **not** in your arms?

$8-3=5$

$13-5=8$

Answer: 8 apples

2. Which of the following figures does not belong?




Answer: B

3. If you are given 8 pancakes and eat ¼ of them and become full. You then give away ½ of the remaining pancakes. How many do you have left?

$8 \times \frac{1}{4} = 2$ $\quad 8-2=6$

$6 \times \frac{1}{2} = 3$ $\quad 6-3=3$

Answer: 3

4. For every birthday you have had, you have blown out the same number of candles as your age. You have blown out a total of 120 candles so far. How old are you?

$1+2+3+4+5+\ldots 15 = 120$

Answer: 15 yrs. old

5. Write answers in lowest terms as a simple fraction.

a. $\frac{4}{7} + \frac{1}{14} - (.8) + \frac{3}{10}$

$\frac{8}{14} + \frac{1}{14} - \frac{8}{10} + \frac{3}{10} = \frac{9}{14} - \frac{5}{10} = \frac{9}{14} - \frac{7}{14} = \frac{2}{14} = \frac{1}{7}$

b. $\frac{1}{3} + \frac{5}{12} - (.5) + \frac{8}{10}$

$\frac{4}{12} + \frac{5}{12} - \frac{5}{10} + \frac{8}{10} = \frac{9}{12}^{3} + \frac{3}{10} = \frac{15}{20} + \frac{6}{20} = \frac{21}{20}$

6. Simplify

a. $\left(\frac{1}{4} + \frac{3}{8}\right) \times \frac{1}{3} \div \frac{3}{12}$

$\left(\frac{2}{8} + \frac{3}{8}\right) \times \frac{1}{3} \times \frac{12}{3} = \frac{5}{8} \times \frac{4}{3} = \frac{5}{6}$

b. $4 - \frac{2}{3} + \frac{11}{6} + 3.5 - 1\frac{2}{3}$

$7.5 - \frac{4}{6} + \frac{11}{6} - \frac{10}{6} = 7\frac{1}{2} - \frac{3}{6} = 7$