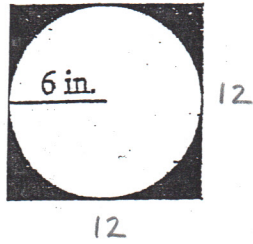


March 13, 2013
Math Bowl

1. Find the area of the shaded region of the square. Circle has a radius 6 in.



$$A_{\square} = 12 \times 12$$

$$= 144$$

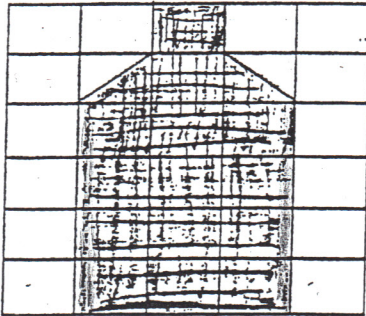
$$A_{\circ} = \pi r^2$$

$$= \pi 6^2$$

$$= 36\pi$$

$$144 - 36\pi$$

2. Find the area of the shaded region.

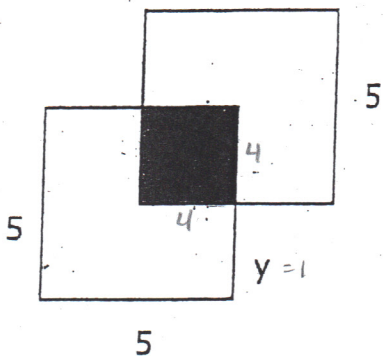


$$\square = 2 \text{ units}^2$$

$$15 \times 2$$

$$30 \text{ units}^2$$

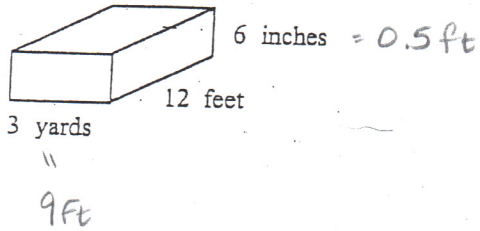
3. If the area of the shaded square is 16, what is the length of y?



$$A_{\square} = 16 = 4^2$$

$$y = 1$$

4. Find the volume of the box (answer in cubic feet)



$$V = l \times w \times h$$

$$= 9 \times 12 \times 0.5$$

$$= 54 \text{ ft}^3$$

54

5. If the volume of a cube is equal to its surface area, how long is its edge?



$$\text{Surface Area} = 6 \times l \times w$$

$$V = l \times w \times h$$

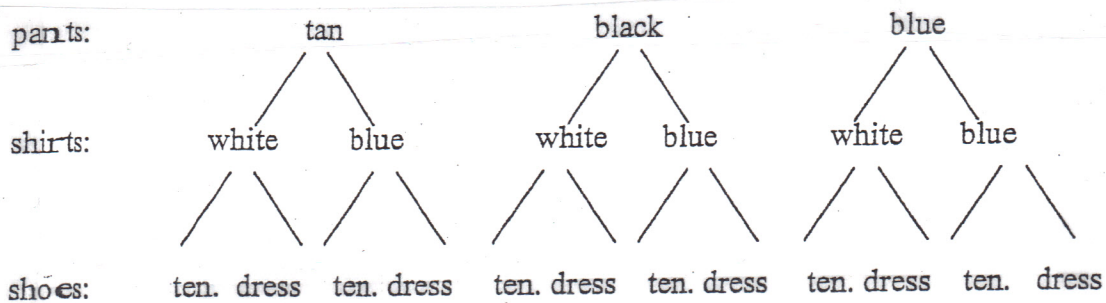
$$\underline{6} \times l \times w = h \times l \times w$$

6

March 13, 2013

Math Bowl

1. Jericho has three pairs of pants (tan, black, and blue), two shirts (white and blue), and two pairs of shoes (tennis shoes and dress shoes). How many ways can he mix and match his outfits?



$$2 \times 3 \times 2 = 12$$

2. If $a \odot b$ means $5a - 3b + 7$, find $6 \odot 4$

$$= 5(6) - 3(4) + 7$$

$$= 30 - 12 + 7$$

$$= 25$$

3. If $x = 3$, $y = 7$, $z = 2$, $x + y = a$, and $y + z = b$. Then what is $a + b$ equal to?

$$x + y = a$$

$$y + z = b$$

$$3 + 7 = a$$

$$7 + 2 = b$$

$$10 = a$$

$$9 = b$$

$$a + b = 10 + 9$$

$$= 19$$

4. Which of the following has 8 as a solution?

a. $4y - 3 = 35$

b. $120 - 2y = 104$

c. $\frac{3}{Z} = \frac{6}{16}$

d. $2x + 3(x - 4) = 36$

e. $18 + 3y = 52$

5. Which box comes next?



B