CORE MATH MADE EASY

SAMPLE PAGES

The CORE Math Test has some problems in which you must select ALL correct answers. This makes things more difficult because 1 answer could be correct, or 2, or 3, or 4 or all of them!

1) Which of the following is a function? Choose <u>all</u> correct answers.

☐ **a)** $\{(2,4)(5,4)(3,7)(2,6)\}$

☐ **b)** $\{(-2,7)(-3,-4)(2,9)(5,-1)\}$

☐ **c)** $\{(4,11)(6,-3)(0,9)(8,-3)\}$

☐ **d)** $\{(5,8)(-2,13)(5,1)(2,3)\}$

☐ **e)** $\{(-7,0)(1,8)(4,1)(3,9)\}$

The CORE Math Test also has some problems where you have to fill in the blank. There are NO choices for you so there is no way to guess.

2) Solve for x: $\sqrt{x-91.3}+21=108$ **"Type" your answer into the box.**

The majority of the test is still multiple choice. That sounds like good news –
doesn't it? Well, they've made it harder because now you have to know a lot of
formulas by heart. I've got all the formulas covered for you in my book!

3)   If the circumference of a circle is 96 feet, which of the following is closest to
     the area of the circle?

     a) 610   b) 730   c) 2900   d) 3800   e) 4700

4)

Men	
Women	

A group of faculty members went out for beer. If the group drank a total
of 93 mugs of beer, how many mugs of beer does each picture represent?

     a) 3   b) 4   c) 5   d) 6   e) 7

You will not see mugs of beer on the CORE test but I try to
make my problems very close to the actual test AND add a little humor.

CORE MATH MADE EASY

SAMPLE PAGES KEY

1) Which of the following **is** a function? Choose <u>all</u> correct answers.

⊠ **b)** $\{(-2,7)(-3,-4)(2,9)(5,-1)\}$

⊠ **c)** $\{(4,11)(6,-3)(0,9)(8,-3)\}$

⊠ **e)** $\{(-7,0)(1,8)(4,1)(3,9)\}$

> **This is easy if you know the rule!**
> *Of course, few people do!*
>
> **In order to be a function, the x (or first number) cannot be repeated.**
>
> **In choice *a* there is a (2, 4) and a (2,6).**
> **In choice *d* there is a (5, 8) and a (5,1).**
> **So, *a* and *d* are not functions.**
>
> **In choices *b*, *c*, and *e*, no x is repeated so each of these <u>is</u> a function.**
>
> ***(Note: It is OK for the y to be repeated.)***

2) Solve for x : $\sqrt{x - 91.3} + 21 = 108$

$$7660.3$$

> $\sqrt{x - 91.3} + 21 = 108$ **First subtract 21 from both sides.**
>
> $\sqrt{x - 91.3} = 87$ **To remove a $\sqrt{}$, we square both sides**
>
> $\left(\sqrt{x - 91.3}\right)^2 = (87)^2$
>
> $x - 91.3 = 7569$ **Next add 91.3 to both sides.**
>
> $x = 7660.3$

3) If the circumference of a circle is 96 feet, which of the following is closest to the area of the circle?

b) 730

> **Circumference = pi times diameter**
> $$C = \pi d$$
> $$96 = (3.14)d \quad \text{Divide both sides by 3.14}$$
> $$d = 30.57$$
>
> **A radius is half of a diameter.**
>
> **So, the radius =** $\dfrac{1}{2}(30.57) = 15.29$
>
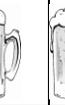> **Area of a circle = pi times the radius squared**
> $$A = \pi r^2 = (3.14)(15.29)^2$$
> $$A = 734.08$$
> **The closest choice is: b) 730.**

4)

| Men | |
| Women | |

A group of faculty members went out for beer. If the group drank a total of 93 mugs of beer, how many mugs of beer does each picture represent?

d) 6

> **93 mugs of beer divided by 15.5 pictures of mugs = 6 mugs/picture**