Meramec Math 160 C Quiz 15 Solution Spring 2013

NAME: _____Score_____/10

1. Two systems of equations are **equivalent** systems if they have the same solution sets.
2. A solution for a system of equations is an ordered n-tuple of numbers which makes **all** of the equations in the system of equations true.
3. In a system of linear equations, if the value of one of the variables is known, an equivalent system is generated if that value is **substituted** into the equations.
4. In a system of linear equations, replacement of an equation with an equivalent equation produces a system which is **equivalent** to the original system.
5. If the same expression is **added** to both sides of an equation the resulting equation will be equivalent to the original equation.
6. If both sides of an equation are **multiplied** by the same non-zero real number, the resulting equation is equivalent to the original equation.
7. **T** F If 3x + 2 is added to both sides of the first equation in the system $\begin{cases} 2x-5y=1 \\ 7x+y=9 \end{cases}$ the resulting system $\begin{cases} 5x-5y+2=3x+3 \\ 7x+y=9 \end{cases}$ is equivalent to the original system.
8. **T** F The Substitution Method is suitable for solving a system of two equations in two variables.
9. T **F** It is possible for 7 to be a solution of a system of equations in two variables.
10. Without solving the system, show that (3, 5) is not a solution of the system $\begin{cases} 2x-3y=-9 \\ 4x+2y=-2 \end{cases}$.

$2(3)-3(5)=-9$ is TRUE

$4(3)+2(5)=-2$ is FALSE

Therefore (3,5) is not a solution.