ISTEP REVIEW #1 Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Due Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. You can choose between two tennis courts at two university campuses to learn how to play tennis. Campus A charges $25 per hour. Campus B charges $20 per hour plus a one-time registration fee of $10.
	1. Write a system of equations to represent the cost *c* for *h* hours of court use at each campus
	2. Find the number of hours in which the costs are the same.
	3. On Saturday, Sierra decides she will practice tennis for 3 consecutive hours. Which campus should she go to and why?
2. Graph the following system of inequalities: $\left\{\begin{array}{c}y<x-1\\y\geq -2x+1\end{array}\right.$
3. Completely factor the following expressions:
	1. $2x^{2}+11x+5$ b) 4x2 – 49
4. What is the value of the expression for the given values of each variable?
	1. $7\left(a+4\right)+3b-8$ for $a=-4$ and $b=5$
	2. $\frac{1}{2}a-5b+12$ for $a=10$ and $b=2$
5. A rectangle with an area of 165cm2 has a width that is 4 centimeters less than its length.

a. Write an equation representing the area of the rectangle. Use *x* to represent the length of the rectangle.

b. Solve your equation for all values of *x*.

c. Use your solution to the equation to identify the length and width of the rectangle. Explain how you determined which value(s) of *x* to use.



1.