Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_

**Homework #6 - Due Friday 10/26**

**Directions 1-5: Solve each equation. Show all work.**

1.  2) 

 3) In the figure ABCD below, the total length of the sides equals 294 yards.

 Find the value of *x*.

 Find the measure of side CD.

 4)  5)  6) [](http://api.gmath.guru/cgi-bin/gmath?%5Cdpi%7B480%7D2x%2B7%3D11-2x)

 7) [](http://api.gmath.guru/cgi-bin/gmath?%5Cdpi%7B480%7D4a%2B7%3D10%2Ba) 8) [](http://api.gmath.guru/cgi-bin/gmath?%5Cdpi%7B480%7D6x-2%3D-18%2Bx) 9) [](http://api.gmath.guru/cgi-bin/gmath?%5Cdpi%7B480%7D8a-2%3D12%2Ba)

 10) [](http://api.gmath.guru/cgi-bin/gmath?%5Cdpi%7B480%7D5x%2B5%3D14%2B2x)

 11) Write and solve an equation to find the value of *x* so that the polygons have the same perimeter.

 12) Write and solve an equation to find the value of *x* so that the polygons have the same perimeter.



 13) Write and solve an equation to find the value of *x* so that the polygons have the same perimeter.

 14) Write and solve an equation to find the value of *x* so that the polygons have the same perimeter.

 15) Write and solve an equation to find the value of *x* so that the polygons have the same perimeter.



**Directions 16-20: Identify if there is one solution, no solution, or infinite solutions.**

 16) [](http://api.gmath.guru/cgi-bin/gmath?%5Cdpi%7B480%7D3x-5%3D2) 17) [](http://api.gmath.guru/cgi-bin/gmath?%5Cdpi%7B480%7D4x%2B8%3D4%5Cleft(x%2B2%5Cright))

 18) [](http://api.gmath.guru/cgi-bin/gmath?%5Cdpi%7B480%7D6%5Cleft(x-3%5Cright)%3D3%5Cleft(2x%2B3%5Cright)) 19) [](http://api.gmath.guru/cgi-bin/gmath?%5Cdpi%7B480%7D4-5x%2B10%3D5%5Cleft(x-4%5Cright))

 20) [](http://api.gmath.guru/cgi-bin/gmath?%5Cdpi%7B480%7D6x-2%3D6x-8)