Algebra 1   9.5 Maze   Name _____

Directions: Solve each quadratic equation by factoring.
Remember to factor out the GCF first when necessary.

1. $x^2 - 4x - 12 = 0$ $(x-6)(x+2)=0$ $x=6 \quad x=-2$	2. $x^2 + 10x + 21 = 0$ $(x+7)(x+3)=0$ $x=-7, \; x=-3$	3. $x^2 - 3x - 10 = 0$ $(x-5)(x+2)=0$ $x=5, \; x=-2$
4. $x^2 + 5x - 14 = 0$ $(x+7)(x-2)=0$ $x=-7, \; x=2$	5. $x^2 - 5x = -6$ $x^2 -5x+6=0$ $(x-3)(x-2)=0$ $x=3, \; x=2$	6. $x^2 + 12 = -7x$ $x^2 +7x+12=0$ $(x+3)(x+4)=0$ $x=-3, \; x=-4$
7. $x^2 - 5x = 24$ $x^2 -5x-24=0$ $(x-8)(x+3)=0$ $x=8, \; x=-3$	8. $-x^2 - 35 = -12x$ $-x^2+12x-35=0$ $-1(x^2-12x+35)=0$ $-1(x-7)(x-5)=0$ $x=7, \; x=5$	9. $-x^2 = 7x + 10$ $0=x^2+7x+10$ $0=(x+5)(x+2)$ $x=-5, \; x=-2$
10. $-x^2 + 12x - 11 = 0$ $-1(x^2-12x+11)=0$ $-1(x-11)(x-1)=0$ $x=11, \; x=1$	11. $-3x^2 - 6x + 45 = 0$ $-3(x^2+2x-15)=0$ $-3(x+5)(x-3)=0$ $x=-5, \; x=3$	12. $-2x^2 + 24x = 72$ $-2(x^2-12x+36)$ $-2(x-6)(x-6)$ $x=6, \; x=6$
13. $x(x - 6) = -8$ $x^2-6x=-8$ $x^2-6x+8=0$ $(x-4)(x-2)=0$ $x=4, \; x=2$	14. $x(x - 3) = 10$ $x^2-3x-10=0$ $(x-5)(x+2)$ $x=5, \; x=-2$	15. $x(2x + 16) = -30$ $2x^2+16x+30=0$ $2(x^2+8x+15)=0$ $2(x+5)(x+3)=0$ $x=-5, \; x=-3$

Poor Patrick is having trouble finding his rainbow and pot of gold. You have agreed to help him find it! Start by answering question one. Fill in the answer. Then complete the next question. Your path of correct answers must be touching the previous box (the boxes may be touching horizontally, vertically, or diagonally). Good luck!

START Here!

	x= -2, x= -6	x= -5, x= 2	x= -7, x= 2	x= 2, x= -3	x= 6, x= -1
x= -2, x=6	x=2, x= -6	x= -2, x= 5	x= -2, x= -3	x= 2, x= 3	x= -6, x= 1
x=7, x=3	x= -7, x= -3	x= 2, x= 3	x= -8, x= 3	x= -3, x= 8	x= -4, x= -3
x= -5, x=2	x= -2, x = 7	x=12, x= -2	x= 11,x= -1	x= 3, x= 4	x= 5, x= 7
x = -8, x= 3	x= -7, x= -5	x= 5, x= -3	x= 1, x= 11	x= -5, x= -2	x= -5, x= -7
x=5, x=2	x= 5, x= 3	x= -5, x= 3	x= -2, x= -4	x= 2, x= 4	x= -2, x= 5
x= 11, x= 1	x= 4, x = 2	x=6, x= -6	x= 6	x= -6	x= -5, x= -3
x= 5, x= -2	x= -5, x= -3	x= 2, x= -4	x=-2, x=5	x=5, x=3	

The End!