

# N#6 LT 3.5 Solving by Factoring HW

Write a quadratic equation in standard form with the given roots.

1. 1, 4  
 $(x-1)(x-4)=0$

3. -2, -5  
 $(x+2)(x+5)=0$

5.  $-\frac{1}{3}, -3$   
 $(x+\frac{1}{3})(x+3)=0$



2. 6, -9  
 $(x-6)(x+9)=0$

4. 0, 7  
 $(x+0)(x-7)=0$   
 $(x-0)(x-7)=0$   
 $x(x-7)=0$

6.  $-\frac{1}{2}, \frac{3}{4}$   
 $(x+\frac{1}{2})(x-\frac{3}{4})=0$

Factor each polynomial/quadratic

7.  $m^2+7m-18$   
 $(m-2)(m+9)$

8.  $2x^2+15x$   
 $5x(4x+3)$

9.  $81z^2-9z$   
 $9z(9z-1)$

10.  $4p^2+4p-24$   
 $4(p^2+p-6)$   
 $4(p-2)(p+3)$

11.  $3y^2+21y+36$   
 $3(y^2+7y+12)$   
 $3(y+3)(y+4)$

16.  $x^2-9x=0$   
 $x(x-9)=0$   
 $x=0, 9$



Solve each equation by factoring

12.  $x^2-3x+2=0$   
 $(x-1)(x-2)=0$   
 $x=1, 2$

13.  $x^2+2x-3=0$   
 $(x-1)(x+3)=0$   
 $x=1, -3$

14.  $x^2-3x-10=0$   
 $(x+2)(x-5)=0$   
 $x=-2, 5$

15.  $x^2-6x+5=0$   
 $(x-1)(x-5)=0$   
 $x=1, 5$