Complete the square for each function.

1. 
$$f(x) = x^2 - 12x + 4$$

2. 
$$f(x) = x^2 + 8x - 10$$

3. 
$$f(x) = -x^2 - 3x +$$
use decimals

Complete the square for each expression.

4. 
$$4x^2 - 8x - 2$$

$$5. -3y^2 + 15y + 7$$

use fractions only

$$6. ax^2 - bx + c$$

 $Find\ the\ slope,\ the\ distance\ and\ the\ midpoint\ for\ the\ given\ points.$ Leave all answers in simplified radical form and as reduced fractions.

8. 
$$(-3,2)$$
 and  $(-5,-4)$  9.  $(a,-3)$  and  $(b,c)$ 

9. 
$$(a, -3)$$
 and  $(b, c)$