

## General to Standard Form by Completing the Square

**Change each of the following to Standard Form and state the vertex.**

1)  $f(x) = -x^2 + 2x + 2$

2)  $f(x) = x^2 + 4x + 5$

3)  $f(x) = -3x^2 - 24x - 47$

4)  $f(x) = \frac{1}{4}x^2 - 2x$

$$5) f(x) = \frac{1}{2}x^2 + 2x + 1$$

$$6) f(x) = x^2 + 6x + 10$$

$$7) f(x) = -x^2 + 2x$$

$$8) f(x) = -x^2 + 8x - 20$$

$$9) f(x) = 2x^2 - 8x + 9$$

$$10) f(x) = -2x^2 - 16x - 36$$

$$11) f(x) = -x^2 + 7x - 16$$

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

$$13) f(x) = x^2 + 5x + 4$$

$$14) f(x) = -2x^2 + 10x - 9$$

$$15) f(x) = x^2 - x - \frac{7}{4}$$

$$16) f(x) = -2x^2 + 2x - 3$$

$$17) f(x) = x^2 - 3x + \frac{21}{4}$$

$$18) f(x) = x^2 + 3x + \frac{1}{4}$$

$$19) f(x) = x^2 - 5x + \frac{13}{4}$$

$$20) f(x) = \frac{1}{2}x^2 + \frac{3}{2}x + 5$$