

**Exercise 1**Change each trinomial to the form  $y = (x + a)^2 + b$ :

1.  $y = x^2 + 4x + 7$

2.  $y = x^2 + 8x + 18$

3.  $y = x^2 + 2x + 7$

4.  $y = x^2 + 16x + 69$

5.  $y = x^2 + 20x + 103$

6.  $y = x^2 + 14x + 50$

**Exercise 2**Change each trinomial to the form  $y = (x \pm a)^2 + b$ :

1.  $y = x^2 - 10x + 27$

2.  $y = x^2 - 4x + 12$

3.  $y = x^2 - 6x + 18$

4.  $y = x^2 - 14x + 53$

5.  $y = x^2 - 22x + 123$

6.  $y = x^2 - 24x + 145$

**Exercise 3**Change each trinomial to the form  $y = b - (x \pm a)^2$ 

1.  $y = -x^2 - 2x + 3$

2.  $y = -x^2 - 4x - 1$

3.  $y = -x^2 + 2x + 4$

4.  $y = -x^2 + 6x + 1$

5.  $y = 7 - 2x - x^2$

6.  $y = 8 + 4x - x^2$

**Exercise 4**Change each trinomial to the form  $y = (x \pm a)^2 + b$ :

1.  $y = x^2 + 12x + 43$

2.  $y = x^2 - 10x + 19$

3.  $y = x^2 - 8x + 18$

Change each trinomial to the form  $y = b - (x \pm a)^2$ 

4.  $y = -x^2 - 4x + 3$

5.  $y = -x^2 + 8x + 6$

6.  $y = -x^2 + 2x + 10$

## National 5 Homework Answers

## Exercise 1

1.  $y = (x + 2)^2 + 3$

2.  $y = (x + 4)^2 + 2$

3.  $y = (x + 1)^2 + 6$

4.  $y = (x + 8)^2 + 5$

5.  $y = (x + 10)^2 + 3$

6.  $y = (x + 7)^2 + 1$

## Exercise 2

1.  $y = (x - 5)^2 + 2$

2.  $y = (x - 2)^2 + 8$

3.  $y = (x - 3)^2 + 9$

4.  $y = (x - 7)^2 + 4$

5.  $y = (x - 11)^2 + 2$

6.  $y = (x - 12)^2 + 1$

## Exercise 3

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

2.  $y = 3 - (x + 2)^2$

3.  $y = 5 - (x - 1)^2$

4.  $y = 10 - (x - 3)^2$

5.  $y = 8 - (x + 1)^2$

6.  $y = 12 - (x - 2)^2$

## Exercise 4

1.  $y = (x + 6)^2 + 7$

2.  $y = (x - 5)^2 - 6$

3.  $y = (x - 4)^2 - 2$

4.  $y = 7 - (x + 2)^2$

5.  $y = 10 - (x - 2)^2$

6.  $y = 11 - (x - 1)^2$