

## Additional Practice – Completing the Square

No Calculator

1

The equation of a parabola is given below.

What is the vertex of the graph of the function?

$$f(x) = x^2 - 12x + 40$$

- A) (-12, 40)
- B) (-6, 148)
- C) (6, 4)
- D) (12, 40)

2

What is the minimum value of the function

$$f(x) = x^2 + 8x + 18 ?$$

- A) 0
- B) 2
- C) 18
- D) 66

Calculator Allowed

3

A trinomial  $ax^2 + bx + c$  is a *perfect square trinomial* if it can be rewritten in the form  $(x + k)^2$ , where  $k$  is some integer. What value of  $c$  in the trinomial below will make it a perfect square trinomial?

$$x^2 - 10x + c$$

- A) -25
- B) -20
- C) 20
- D) 25

**4**

The equation of a circle is given below.

What is the center of the circle?

$$x^2 + y^2 - 2x + 10y + 10 = 0$$

- A) (-2, 10)
- B) (1, -5)
- C) (2, 5)
- D) (2, 10)

**5**

The equation of a circle is given below.

What is the radius of the circle?

$$x^2 + y^2 - 12x + 6y - 19 = 0$$

- A) 4
- B) 6
- C) 8
- D) 12