

A2.A.47: Equations of Circles: Determine the center-radius form for the equation of a circle in standard form

- 1 The equation $x^2 + y^2 - 2x + 6y + 3 = 0$ is equivalent to

- 1) $(x - 1)^2 + (y + 3)^2 = -3$
- 2) $(x - 1)^2 + (y + 3)^2 = 7$
- 3) $(x + 1)^2 + (y + 3)^2 = 7$
- 4) $(x + 1)^2 + (y + 3)^2 = 10$

- 2 What are the coordinates of the center of a circle whose equation is $x^2 + y^2 - 16x + 6y + 53 = 0$?

- 1) $(-8, -3)$
- 2) $(-8, 3)$
- 3) $(8, -3)$
- 4) $(8, 3)$

A2.A.47: Equations of Circles: Determine the center-radius form for the equation of a circle in standard form**Answer Section**

1 ANS: 2

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

$$x^2 - 2x + 1 + y^2 + 6y + 9 = -3 + 1 + 9$$

$$(x - 1)^2 + (y + 3)^2 = 7$$

REF: 061016a2

2 ANS: 3

$$x^2 + y^2 - 16x + 6y + 53 = 0$$

$$x^2 - 16x + 64 + y^2 + 6y + 9 = -53 + 64 + 9$$

$$(x - 8)^2 + (y + 3)^2 = 20$$

REF: 011415a2