

A2.A.48: Equations of Circles: Write the equation of a circle, given its center and a point on the circle

- 1 What is the equation of the circle passing through the point $(6, 5)$ and centered at $(3, -4)$?
 - 1) $(x - 6)^2 + (y - 5)^2 = 82$
 - 2) $(x - 6)^2 + (y - 5)^2 = 90$
 - 3) $(x - 3)^2 + (y + 4)^2 = 82$
 - 4) $(x - 3)^2 + (y + 4)^2 = 90$

- 2 Which equation represents a circle with its center at $(2, -3)$ and that passes through the point $(6, 2)$?
 - 1) $(x - 2)^2 + (y + 3)^2 = \sqrt{41}$
 - 2) $(x + 2)^2 + (y - 3)^2 = \sqrt{41}$
 - 3) $(x - 2)^2 + (y + 3)^2 = 41$
 - 4) $(x + 2)^2 + (y - 3)^2 = 41$

- 3 What is the equation of a circle with its center at $(0, -2)$ and passing through the point $(3, -5)$?
 - 1) $x^2 + (y + 2)^2 = 9$
 - 2) $(x + 2)^2 + y^2 = 9$
 - 3) $x^2 + (y + 2)^2 = 18$
 - 4) $(x + 2)^2 + y^2 = 18$

A2.A.48: Equations of Circles: Write the equation of a circle, given its center and a point on the circle**Answer Section**

1 ANS: 4

$$r = \sqrt{(6-3)^2 + (5-(-4))^2} = \sqrt{9+81} = \sqrt{90}$$

REF: 061415a2

2 ANS: 3

$$r = \sqrt{(6-2)^2 + (2-(-3))^2} = \sqrt{16+25} = \sqrt{41}$$

REF: 081516a2

3 ANS: 3

$$r = \sqrt{(3-0)^2 + (-5-(-2))^2} = \sqrt{9+9} = \sqrt{18}$$

REF: 011624a2