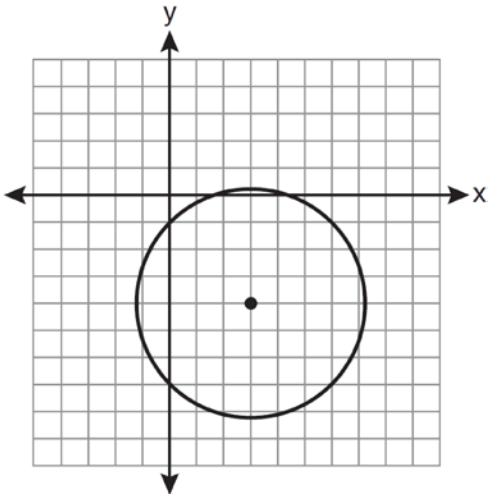
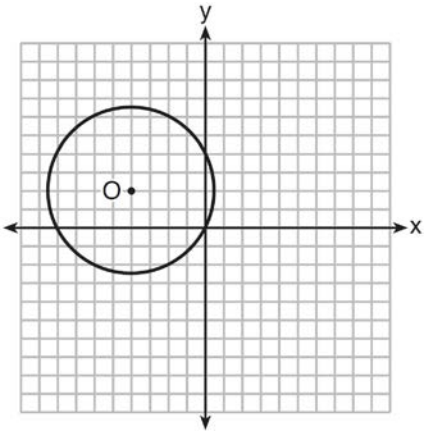
A2.A.49: Equations of Circles: Write the equation of a circle from its graph

1 Which equation represents the circle shown in the graph below that passes through the point $(0, -1)$?



1) $(x-3)^2+(y+4)^2=16$
2) $(x-3)^2+(y+4)^2=18$
3) $(x+3)^2+(y-4)^2=16$
4) $(x+3)^2+(y-4)^2=18$

2 A circle with center O and passing through the origin is graphed below.

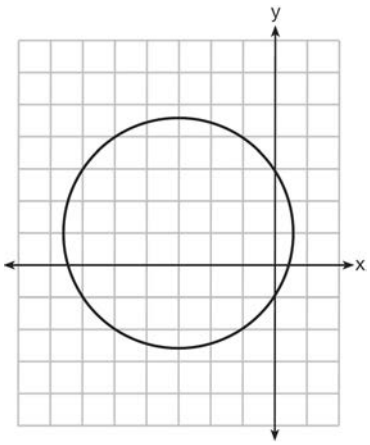


What is the equation of circle O?

1) $x^2+y^2=2\sqrt{5}$
2) $x^2+y^2=20$
3) $(x+4)^2+(y-2)^2=2\sqrt{5}$
4) $(x+4)^2+(y-2)^2=20$

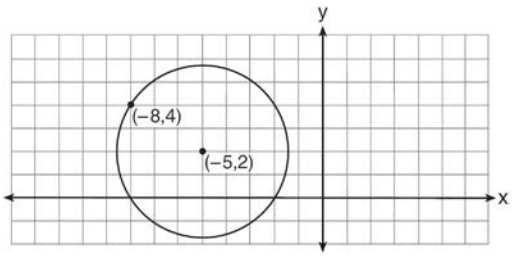
Name: _____

3 Which equation is represented by the graph below?

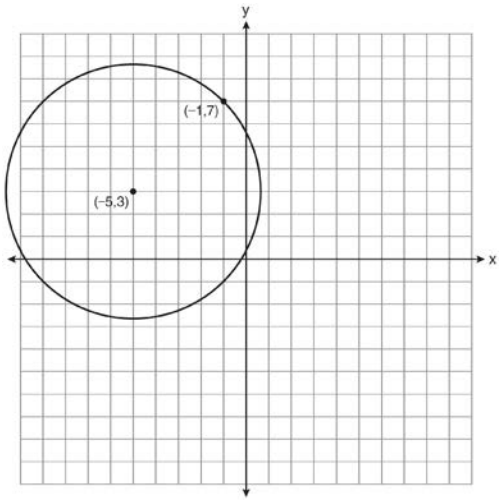


1) $(x-3)^2+(y+1)^2=5$
2) $(x+3)^2+(y-1)^2=5$
3) $(x-1)^2+(y+3)^2=13$
4) $(x+3)^2+(y-1)^2=13$

4 Write an equation of the circle shown in the diagram below.

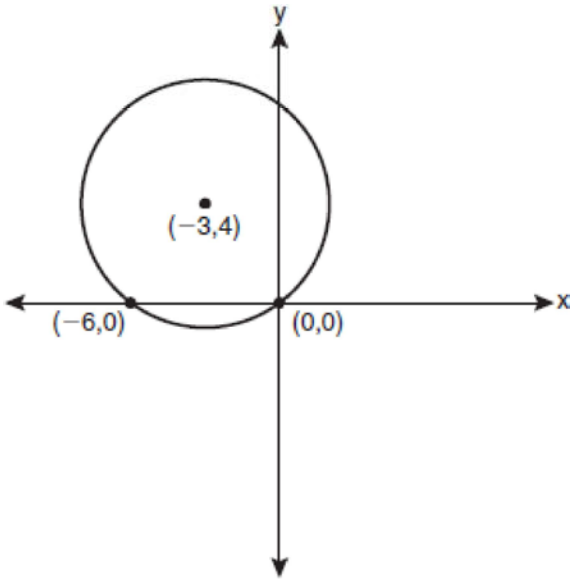


5 A circle shown in the diagram below has a center of $(-5, 3)$ and passes through point $(-1, 7)$.



Write an equation that represents the circle.

6 Write an equation of the circle shown in the graph below.



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Answer Section

1 ANS: 2 REF: 011126a2

2 ANS: 4 REF: 011513a2

3 ANS: 4 REF: 061318a2

4 ANS:

$r = \sqrt{2^2 + 3^2} = \sqrt{13}$. $(x+5)^2 + (y-2)^2 = 13$

REF: 011234a2

5 ANS:

$(x+5)^2 + (y-3)^2 = 32$

REF: 081033a2

6 ANS:

$(x+3)^2 + (y-4)^2 = 25$

REF: fall0929a2