





张斯乐





4.Additional Topics in Math

4.3 Circle Equations

Standard equation of circle: $(x - a)^2 + (y - b)^2 = r^2$, where the center is (a, b) and radius is r.



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4.3 Circle Equations

1. $x^2 + 20x + y^2 + 16y = -20$

The equation above defines a circle in the xy-plane. What are the coordinates of the center of the circle?



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2.In the xy-plane, the graph of $2x^2 - 6x + 2y^2 + 2y = 45$ is a circle. What is the radius of the circle?









3.A circle in the xy-plane has equation $(x + 3)^2 + (y - 1)^2 =$ 25. Which of the following points does NOT lie in the interior of the circle?



4.



$$(x-6)^2 + (y+5)^2 = 16$$

In the *xy*-plane, the graph of the equation above is a circle. Point *P* is on the circle and has coordinates (10, -5). If \overline{PQ} is a diameter of the circle, what are the coordinates of point *Q* ?





5.

An angle with a measure of $\frac{7\pi}{6}$ radians has a

measure of *d* degrees, where $0 \le d < 360$. What is the

value of d?







