Answer on Question #57351 – Math – Analytic Geometry

Question

Graph the equations shown below, the graph is scaled 9 high and 9 wide.

X^2 y^2
----- + ------- = 1
20 20

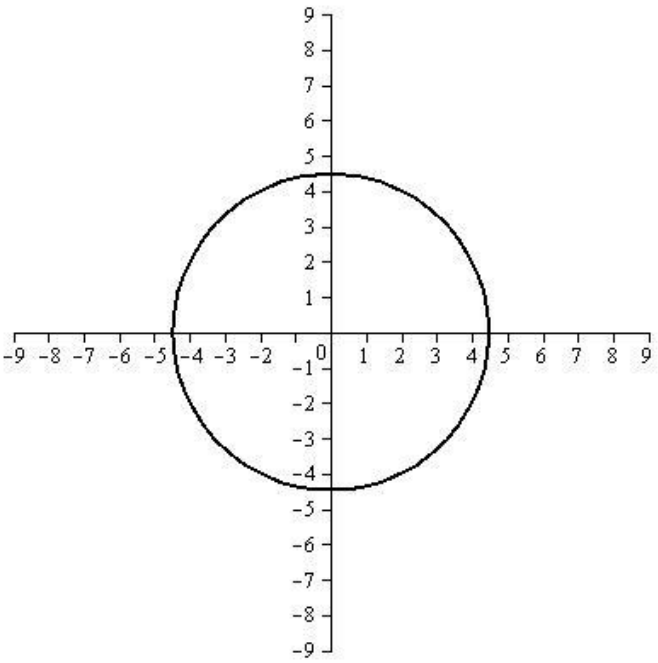
6x^2 + 6y^2 = 144

x^2 + y^2 = 16

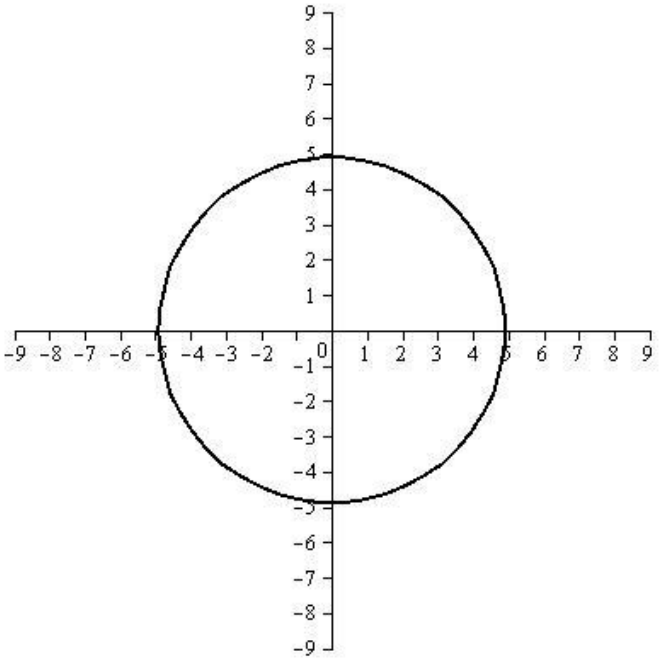
20x^2 – 20y^2 = 400

Solution

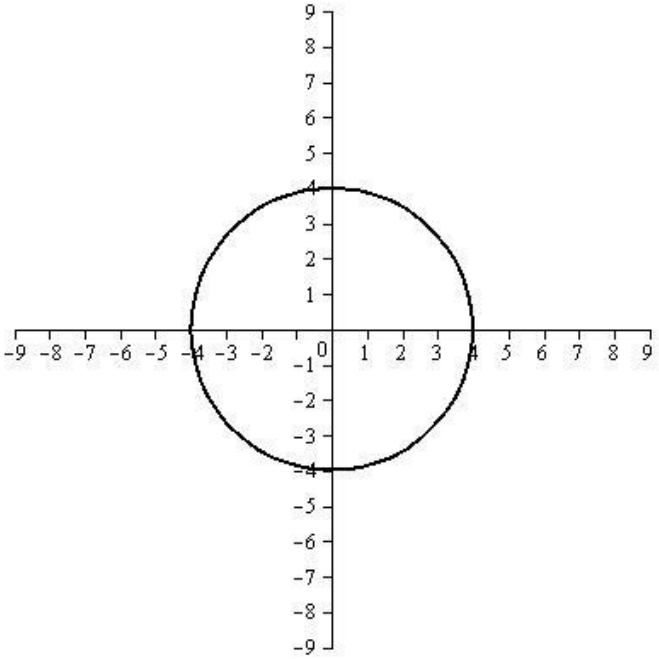
1. $\frac{x^2}{20}+\frac{y^2}{20}=1$ is a circle centered on (0,0) and with radius of $\sqrt{20}=2\sqrt{5}$.



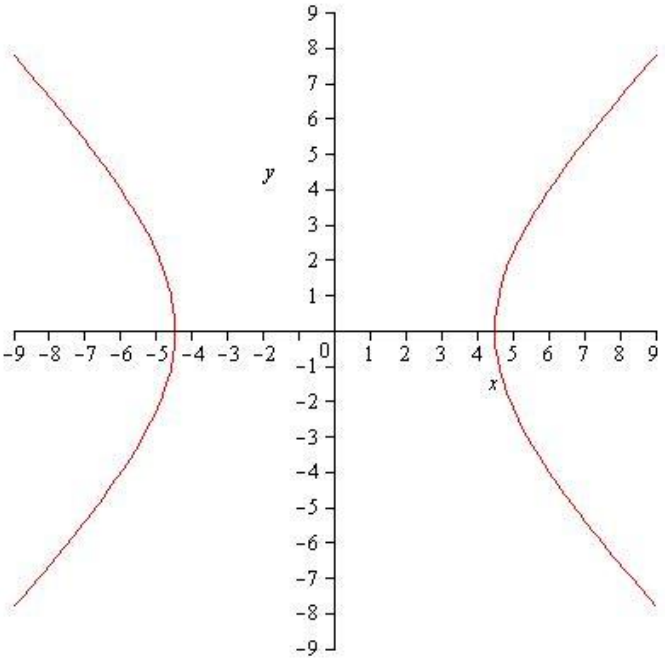
2. $6x^2+6y^2=144$ is a circle centered on (0,0) and with radius of $\sqrt{\frac{144}{6}}=\frac{12}{\sqrt{6}}=2\sqrt{6}$.



3. $x^2 + y^2 = 16$ is a circle centered on (0, 0) and with radius of 4.



4. $20x^2 - 20y^2 = 400$ is a hyperbola centered on (0,0) with the horizontal transverse axis, $a = b = \sqrt{20} = 2\sqrt{5}$.


y
x