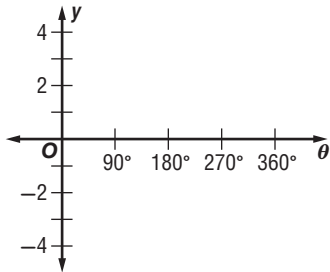


13-7 Practice

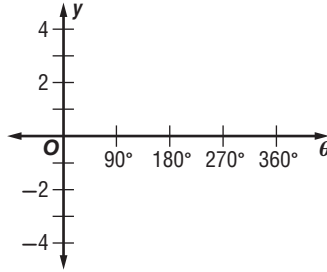
Graphing Trigonometric Functions

Find the amplitude, if it exists, and period of each function. Then graph the function.

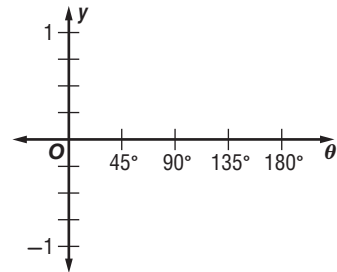
1. $y = \frac{3}{2} \sin \theta$



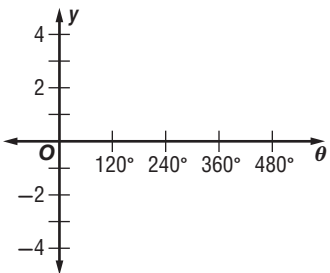
2. $y = \cot \frac{1}{2} \theta$



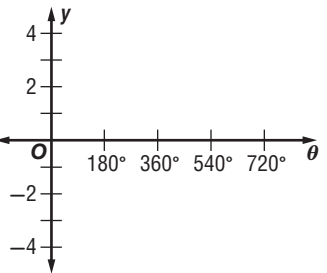
3. $y = \cos 5\theta$



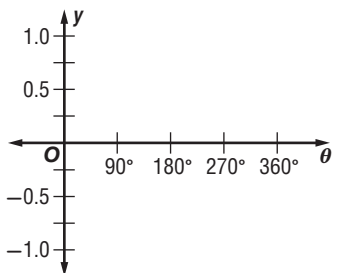
4. $y = \csc \frac{3}{4} \theta$



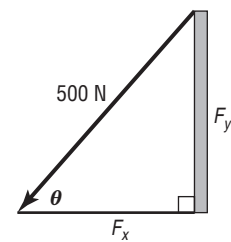
5. $y = 2 \tan \frac{1}{2} \theta$



6. $y = \frac{1}{2} \sin \theta$



7. FORCE An anchoring cable exerts a force of 500 Newtons on a pole. The force has the horizontal and vertical components F_x and F_y . (A force of one Newton (N), is the force that gives an acceleration of 1 m/sec^2 to a mass of 1 kg.)



a. The function $F_x = 500 \cos \theta$ describes the relationship between the angle θ and the horizontal force. What are the amplitude and period of this function?

b. The function $F_y = 500 \sin \theta$ describes the relationship between the angle θ and the vertical force. What are the amplitude and period of this function?

8. WEATHER The function $y = 60 + 25 \sin \frac{\pi}{6} t$, where t is in months and $t = 0$ corresponds to April 15, models the average high temperature in degrees Fahrenheit in Centerville.

a. Determine the period of this function. What does this period represent?

b. What is the maximum high temperature and when does this occur?