

1. Is this an even or an odd function? $y = -x^2 + 3$
2. Convert -22.569° to $D^\circ M' S''$ form. Convert $135^\circ 14' 12''$ to decimal form.
3. Jack and Jill both start at point A. They each walk in a straight line at an angle of 105° to each other. After 45 minutes Jack has walked 4.5km and Jill has walked 6km. How far apart are they?
4. A 40 -inch pendulum swings through an angle of 18° . Find the length of the arc in inches through which the tip of the pendulum swings.
5. From a point 200 feet from its base, the angle of elevation from the ground to the top of a lighthouse is 55 degrees. How tall is the lighthouse? Your answer should be correct to three places after the decimal point.
6. Determine $f(g(x))$ given:
 $f(x) = 5x^2 + 1$
 $g(x) = 4x - 7$
7. Write the polynomial $f(x) = x^3 - x + 6$ in completely factored form given that $(x + 2)$ is a factor.
8. Find the center of the ellipse: $9x^2 + 4y^2 - 36x - 24y - 36 = 0$
9. Name the conic: $25y^2 - 144x^2 + 150y - 576x - 3951 = 0$
10. For the function, $f(x)$, find the value(s) of discontinuity
 $f(x) = \frac{x^2 + 5x + 6}{x + 2}$