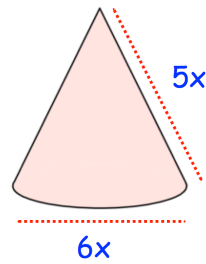


Find an expression for the third side.

The cone is made from a material with density 5g/cm^3 .

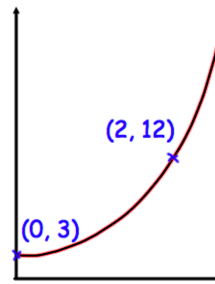
Write an expression for the mass of the cone, in terms of x .



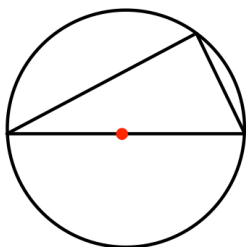
The sketch shows a curve with equation $y = ab^x$ where a and b are constants and $b > 0$

The curve passes through the points $(0, 3)$ and $(2, 12)$

Calculate the value of a and b



Solve the inequality $x^2 + 6x + 8 < 0$



Prove that the angle in a semi-circle is always 90°