



 $y = 4 - x^2$ is a parabola facing downwards with vertex (2,4).

The parabola intersects the x-axis on points (0,0) and (4,0).

Remember that, Area bounded by the curves is given by,

Area = $\int_a^b f(x) - g(x) dx$, where f(x) is the upper curve and g(x) is the lower curve and $x \in [a, b]$.

In this case, the upper function is $f(x) = 4x - x^2$ and lower function is g(x) = 0 and $x \in [0, 4]$.

Area =
$$\int_{a}^{b} f(x) - g(x) dx$$
=
$$\int_{0}^{4} 4x - x^{2} dx$$
=
$$\left[2x^{2} - \frac{x^{3}}{3}\right]_{0}^{4} = \frac{32}{3} \text{ square units}$$