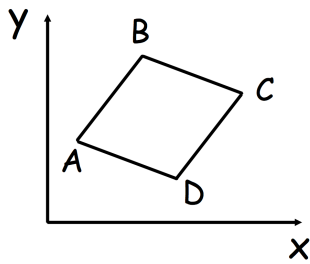




Simplify

$$(16x^4)^{\frac{3}{2}}$$



ABCD is a rhombus

The coordinates of B are (5, 13)

The equation of diagonal AC is

$$y = \frac{1}{2}x + 6$$

Find the equation of diagonal BD

Material A has a density of  $3.8\text{g/cm}^3$  to the nearest  $0.1\text{g/cm}^3$   
Material B has a density of  $6\text{g/cm}^3$  to 1 significant figure.

600g of Material A and 1kg of Material B form Material C.

Work out the lower bound for the density of Material C.

Find the coordinates of the points where the curve  $y = x^2 - 3x + 5$  and the line  $2x - y + 1 = 0$  meet.

Walter picks two integers with a difference of 3.  
Prove the difference between the squares of the integers is three times the sum of the integers.