

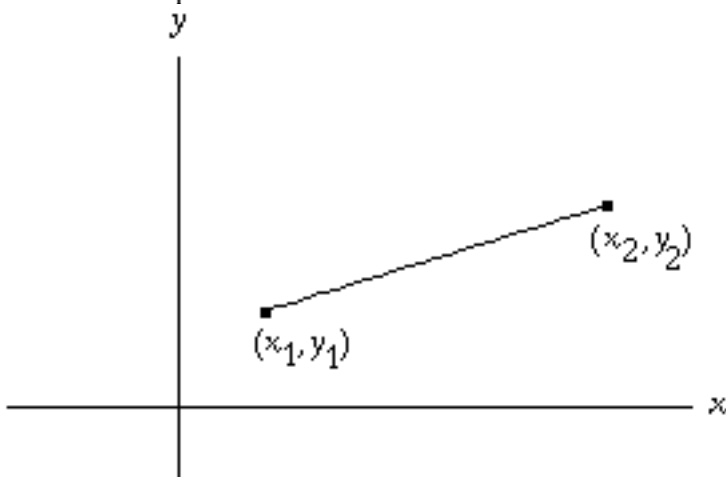
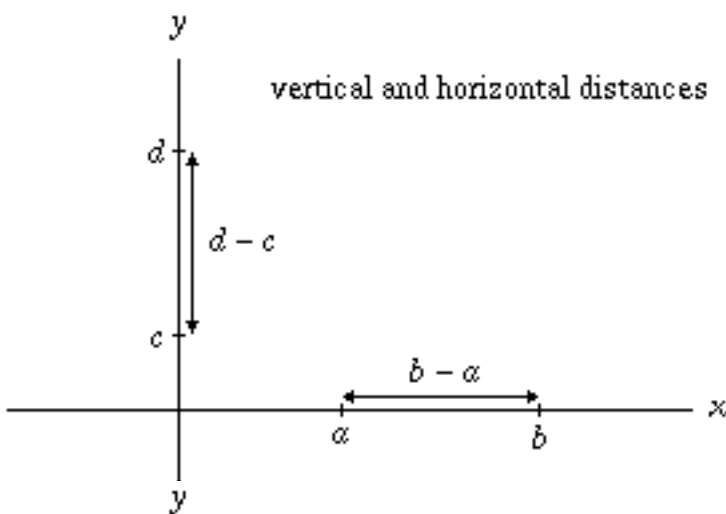
$$\pi \approx 3.1416$$

$$e \approx 2.7183$$

$$\sqrt{2} \approx 1.4142$$

$$\log(1)=0, \log(10)=1, \ln(1)=0, \ln(e)=1$$

$$\log(ab)=\log(a)+\log(b), \log(a^b)=b \log(a)$$



$$\text{distance} = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$\text{slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\tan(x) = \frac{\sin(x)}{\cos(x)}$$

$$\sin^2 x + \cos^2 x = 1$$

$$\sin(-x) = -\sin(x)$$

$$\sin(2x) = 2 \sin x \cos x$$

$$\cos(-x) = \cos(x)$$

x	0	$\frac{\pi}{6}$	$\frac{\pi}{4}$	$\frac{\pi}{3}$	$\frac{\pi}{2}$	π	$\frac{3\pi}{2}$	2π
$\cos x$	1	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{1}{2}$	0	-1	0	1
$\sin x$	0	$\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{\sqrt{3}}{2}$	1	0	-1	0
$\tan x$	0	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$	undefined	0	undefined	0

area of a circle

$$A = \pi r^2 \quad r=\text{radius}$$

circumference of a circle

$$C = 2\pi r \quad r=\text{radius}$$

area of a rectangle

$$A = lw \quad l=\text{length}, w=\text{width}$$

perimeter of a rectangle

$$P = 2l + 2w \quad l=\text{length}, w=\text{width}$$

area of a triangle

$$A = \frac{1}{2}bh \quad b=\text{base}, h=\text{height}$$

volume of a rectangular solid

$$V = lhw \quad l=\text{length}, w=\text{width}, h=\text{height}$$

volume of a right circular cylinder

$$V = \pi r^2 h \quad r=\text{radius}, h=\text{height}$$

volume of a right circular cone

$$V = \frac{1}{3}\pi r^2 h \quad r=\text{radius}, h=\text{height}$$

volume of a sphere

$$V = \frac{4}{3}\pi r^3 \quad r=\text{radius}$$

Other things you should know

Area of Trapezoid

Pythagorean Theorem

Surface area of a box

Perimeter of a polygon