[redacted]

5-7-22

(41) $\sin^2 x + \cos^2 x = 1$

$4/13 + ? = 1$

(42) $a \sin(x)$

amplitude

(54) $\log_{10}(x) = y \Rightarrow 10^y = x$

Convert to exponent form

input input

x		Example
+	✓	$10^1 = 10$
0	X	X
−	X	X

so domain of x is $(0, \infty)$

$y = \log_{10}(x^2 - 4x + 3)$

has to be > 0

$x^2 - 4x + 3 > 0$

(55) $\det\begin{vmatrix} 8 & 3 \\ -5 & -2 \end{vmatrix} = 8(-2) - (3(-5)) = -16 - (-15) = -1$

main diagonal off diagonal

$\det\begin{vmatrix} a & b \\ c & d \end{vmatrix} = ad - bc$

32) Scientific notation

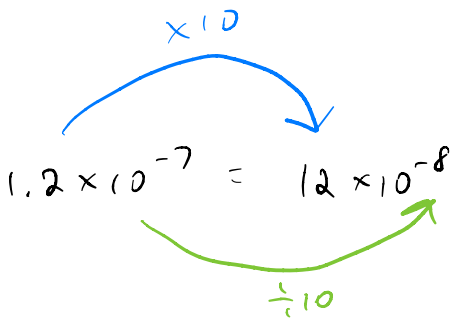
standard $120\,000\,000$

scientific 1.2×10^{8}

scientific 1.2×10^{-7}

standard $0.000\,000\,12$

$[1, 10)$



Related to counting in: base 10, base 2, any base

2.3 million

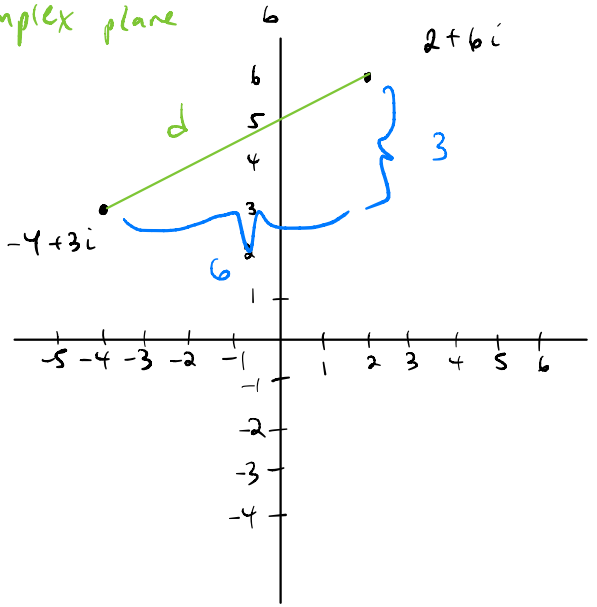
2.3×10^{6}

1234

1	thousand	$= 1 \times 10^{3}$
2	hundreds	$+ 2 \times 10^{2}$
3	tens	$+ 3 \times 10^{1}$
4	ones	$+ 4 \times 10^{0}$

57)

complex plane



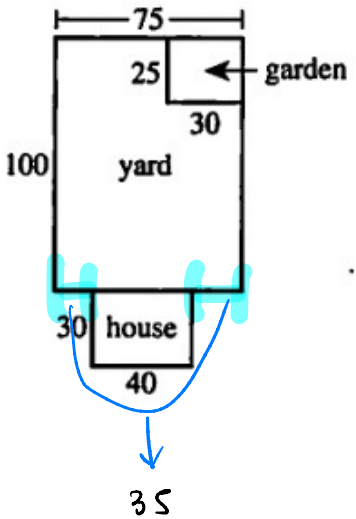
complex number : $a + bi$

$$\text{distance} = \sqrt{3^2 + 6^2}$$
$$= \sqrt{9 + 36}$$
$$= \sqrt{45}$$

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

magnitude of $a + bi$ is $\sqrt{a^2 + b^2}$

39)



$100 + 100 + 75 + 35 = C.310$

59) standard deviation σ (sigma)

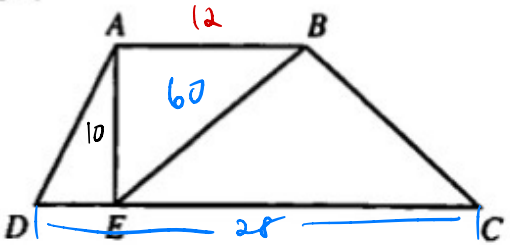
variance σ^2 (sigma squared)

A)

49)

49. In the figure below, $ABCD$ is a trapezoid with $\overline{AE}$ perpendicular to $\overline{AB}$; $\overline{AE}$ is 10 units long; and $\overline{DC}$ is 28 units long. If the area of right triangle $\triangle EBA$ is 60 square units, what is the area, in square units, of trapezoid $ABCD$?

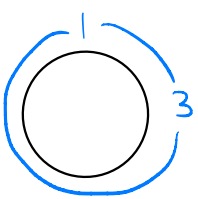
A. 140
B. 170
C. 180
D. 200
E. 240



$A_{trapezoid} = \left(\frac{b_1 + b_2}{2}\right) h$

$= \frac{28+12}{2}\ 10 = 20 \cdot 10 = 200$

60)



How far does center of circle move in one rotation?

3 units

51) Geometry:

ALWAYS GRAPH or

DRAW PICTURE