LESSON 26

MA 16100 · FALL 2022

DR. HOOD

WARM UP

The distance (in miles) that Bob walks is described by $s(x)$. If he walks at speed 2 mph, how long does it take him to walk a distance $s(x)$?

time

$[s(x)]$ = miles $[2\text{mph}] = \frac{\text{mile}}{\text{hour}}$

want hours

$\left[\frac{s(x)}{2 \text{ mi/hr}}\right] = \text{hr}$

a) $\frac{s(x)}{2}$

b) $2s(x)$

c) $\frac{2}{s(x)}$

dimensional analysis

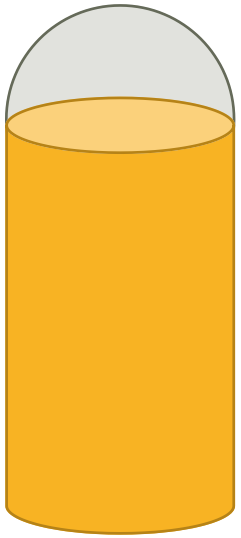
ANNOUNCEMENTS

- Dr. Hood's Office Hours in Math 844
  - Mon and Wed at 3:30-4:30pm
  - Friday at 2:30-3:30pm

- TA's Office Hours in the Math Resource Room
  - WTHR 313
  - Mon – Thu from 9:30am – 8:30pm
  - Fri from 9:30am – 3:30pm

POLL 1

What equation describes the cost to build a silo with height h and radius r?



a) $C = 10\pi rh + 4\pi r^2$

b) $C = 40\pi^2 r^3 h$

c) $C = 4\pi rh + 10\pi r^2$

sides: ($2)($2\pi rh$)

roof: ($5)($2\pi r^2$) +

$4\pi rh + 10\pi r^2$

POLL 2

How many critical points does $C(r) = \frac{40{,}000}{r} + \frac{22\pi}{3} r^2$ have?

a) 0 critical points

b) 1 critical point

c) 2 critical points

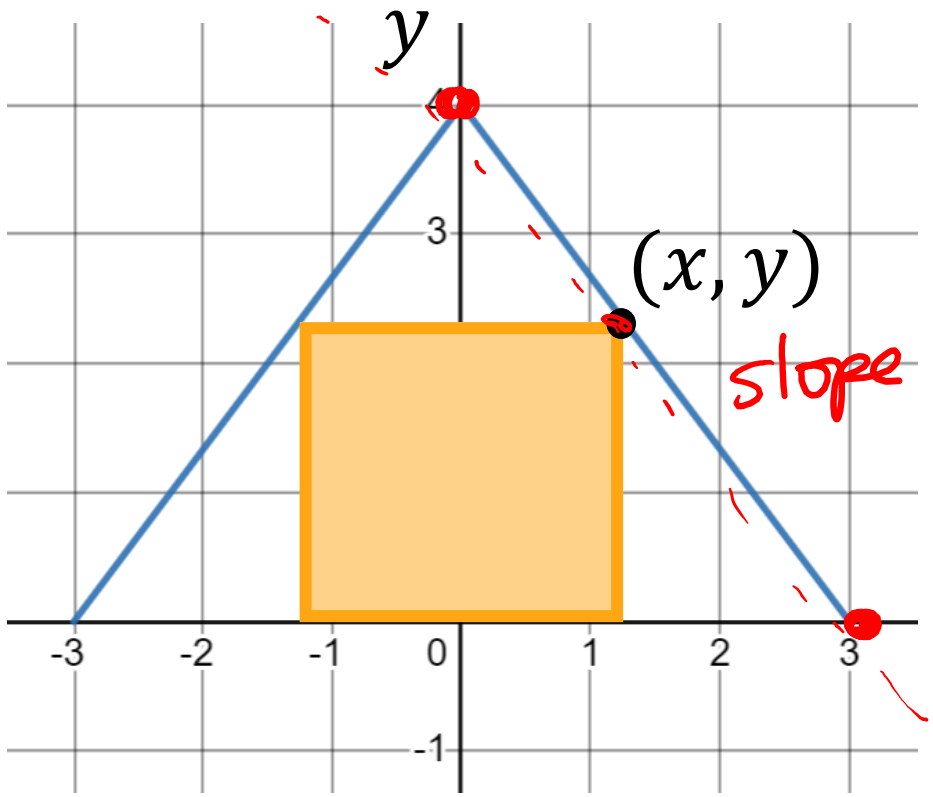
POLL 3

What is the relationship between x and y?

a) $x^2 + y^2 = 3^2$

b) $y = -\frac{4}{3}x + 4$

c) $4y = 3x$



slope $-\frac{4}{3}$

line thru (3,0) and (0,4)

$(y-0) = -\frac{4}{3}(x-3)$

$y = -\frac{4}{3}x + 4$