

Written assignments
to hand in.

Section 2.3

8, 44

Due Wednesday 10/18

Section 2.4

18, 38

Due Friday 10/20

Section 2.5

42, 50

Due Monday 10/23

Discussion Problems

From the department syllabus

These are not to hand in.

Sections 2.4, 2.5, 2.6

WebAssign

sections 2.3 + 2.4

Due Friday 10/20, 9pm

Exam 2 will be covering

1.6-1.8, 2.1-2.8

Section 2.5

(43)



maximum possible
rise of the ramp.

a) what is the max slope of such a ramp?

$$\frac{\text{rise}}{\text{run}} = \frac{1}{12}$$

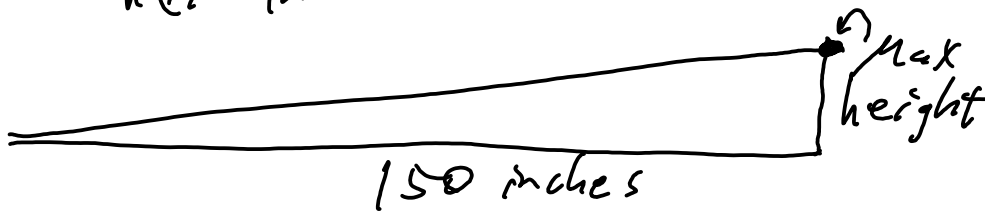
Find a linear function $h(x)$ modeling height
in inches where x is horizontal distance also
in inches.

$$h(x) = mx + b$$

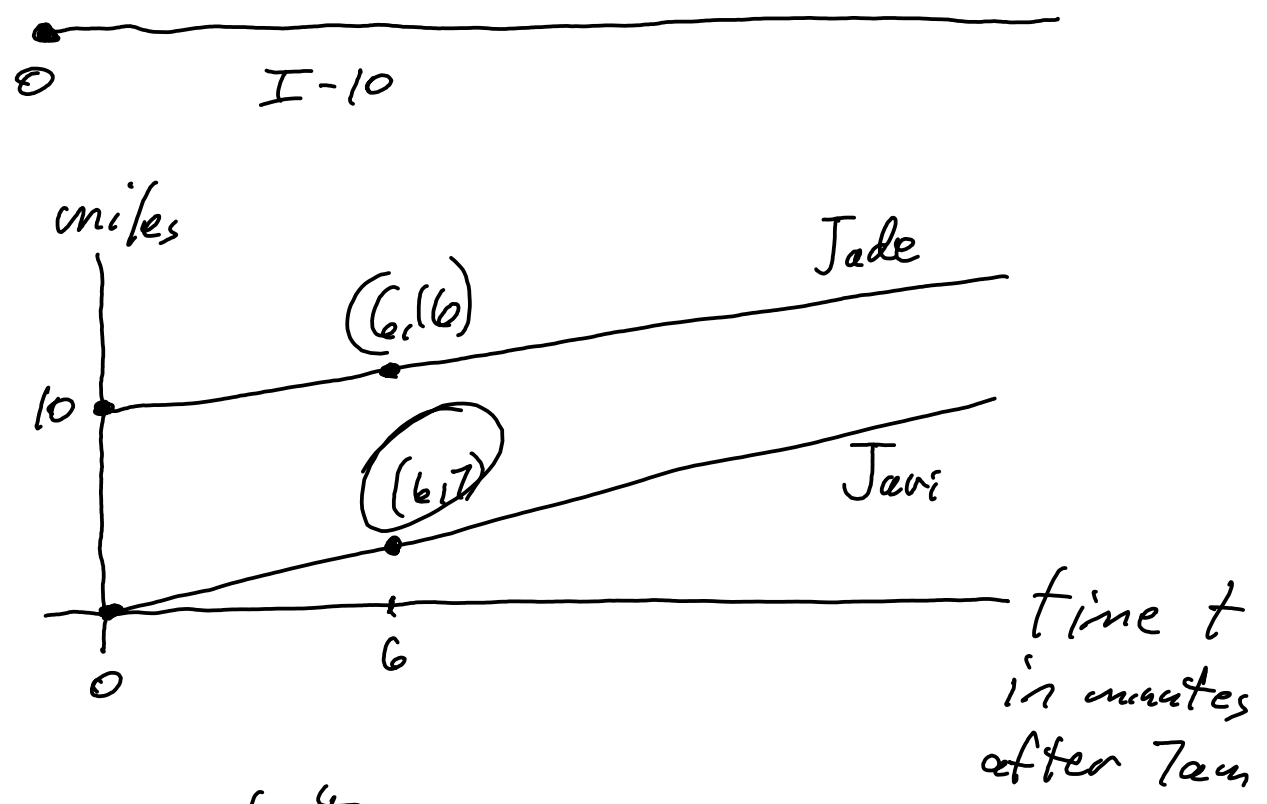
$$h(x) = \frac{1}{12}x + 0$$

$$h(x) = \frac{1}{12}x$$

b)



$$h(150) = \frac{1}{12}150 = \frac{150}{12} \approx 12.5 \text{ inches.}$$



Ⓒ looking at the graphs of distance, who is going faster?

Jari is going faster because speed = rate of change = slope and Jari's slope is steeper.

Ⓓ Find Jade's and Jari's speed in $\frac{mi}{hr}$.

$$\text{Jade's slope} = \frac{16-10}{6-0} = \frac{6}{6} = 1 \frac{mi}{min}$$

$$\text{Jari's slope} = \frac{7-0}{6-0} = \frac{7}{6} = 1.16 \frac{mi}{min}$$

$$1 \cdot \frac{60}{1} = 60 \text{ Jude's speed}$$

$$\frac{\text{mi}}{\text{min}} \cdot \frac{\text{min}}{\text{hr}} = \frac{\text{mi}}{\text{hr}}$$

$$\frac{7}{6} \cdot \frac{60}{1} = \frac{420}{6} = 70 \text{ Tari's speed}$$

$$\frac{\text{mi}}{\text{min}} \cdot \frac{\text{min}}{\text{hr}} = \frac{\text{mi}}{\text{hr}}$$

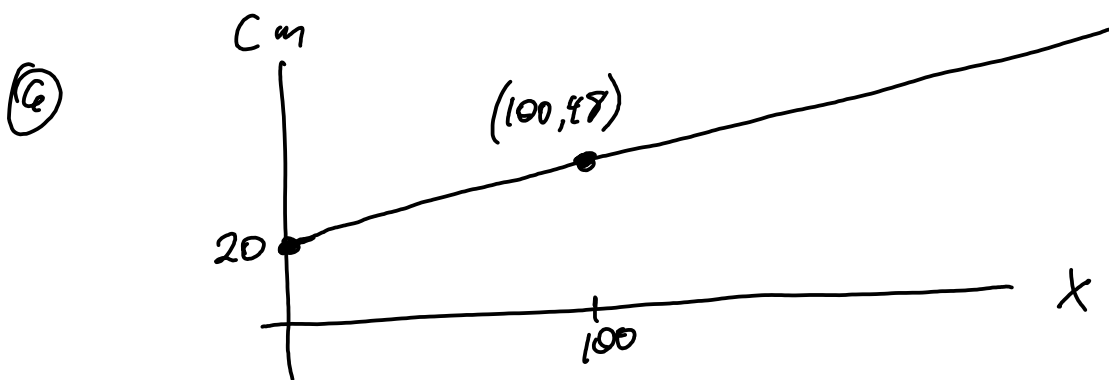
①

$$d(t) = t + 10 \text{ miles}$$

$$r(t) = \frac{7}{6}t \text{ miles}$$

we use the speed in $\frac{\text{mi}}{\text{min}}$ rather than $\frac{\text{mi}}{\text{hr}}$ because t is in minutes.

④⑧ $D(x) = 20 + .24x$ cm where x is in years.



⑦ slope = .24

⑨ At what rate is sediment increasing? $.24 \frac{\text{cm}}{\text{yr}}$