Rate of Change "Slope"

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Mrs. Ahoss

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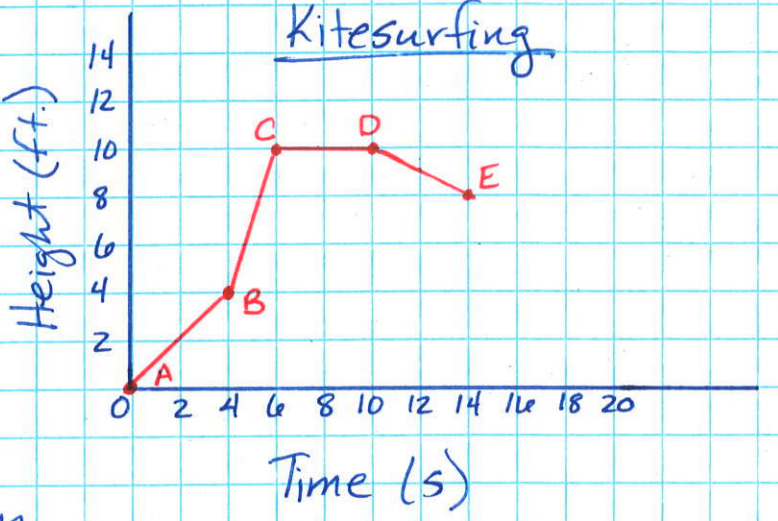
- Between which two consecutive points did the height of the kitesurfer increase the most? _____



- What is happening between points C and D?
  - ☐ The kitesurfer is not moving
  - ☐ The kitesurfer is maintaining his height

- Find the rate of change for each section of the graph.

A to B
(0,0) (4,4)

$\frac{y^2 - y^1}{x^2 - x^1}$

$\frac{4-0}{4-0}$

$\frac{4}{4} = 1$ ft/sec.

B to C
(4,4) (6,10)

$\frac{y^2 - y^1}{x^2 - x^1}$

$\frac{10-4}{6-4}$

$\frac{6}{2} = 3$ ft/sec

C to D
(6,10) (10,10)

$\frac{y^2 - y^1}{x^2 - x^1}$

$\frac{10-10}{10-6}$

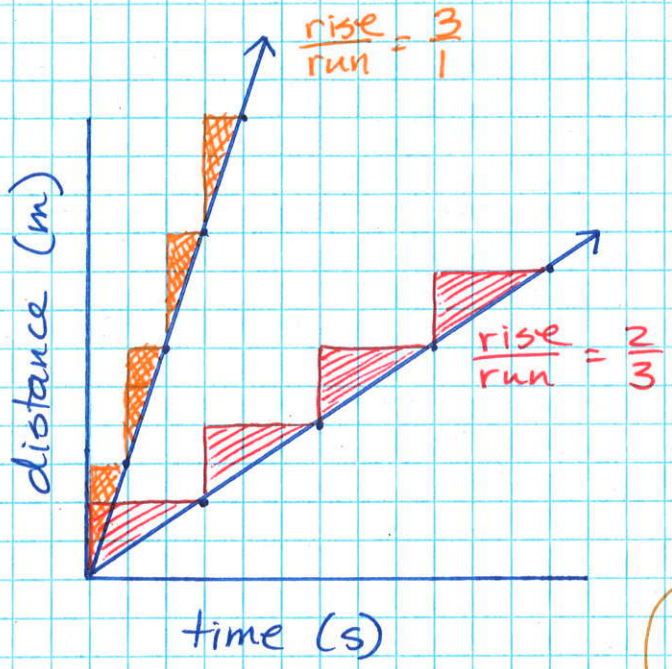
$\frac{0}{4} = 0$ ft/sec

D to E
(10,10) (14,8)

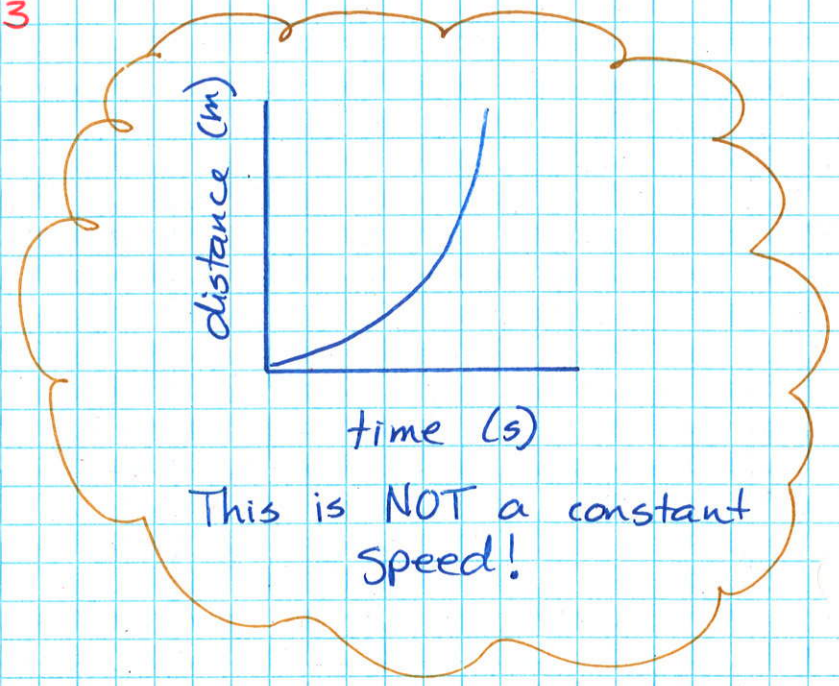
$\frac{y^2 - y^1}{x^2 - x^1}$

$\frac{8-10}{14-10}$

$\frac{-2}{4} = -.5$ ft/sec



- A steeper slope means a faster rate.
- Both are showing a constant speed



This is NOT a constant speed!

x Amount of info (mb)	y Time (s)
2.5	10
3.75	15
10	40
25	100

Slope $\frac{y^2-y^1}{x^2-x^1} = \frac{5}{1.25} = 4$ sec/Mb

Slope $\frac{y^2-y^1}{x^2-x^1} = \frac{25}{6.25} = 4$ sec/M

slope $\frac{y^2-y^1}{x^2-x^1} = \frac{\quad}{\quad} = 4$ sec/M

Direct variation (or constant change) shown on a chart!

Use what you know about slope!

$y = mx$

$\frac{10}{2.5} = \frac{m(2.5)}{2.5}$

$4 = m$