

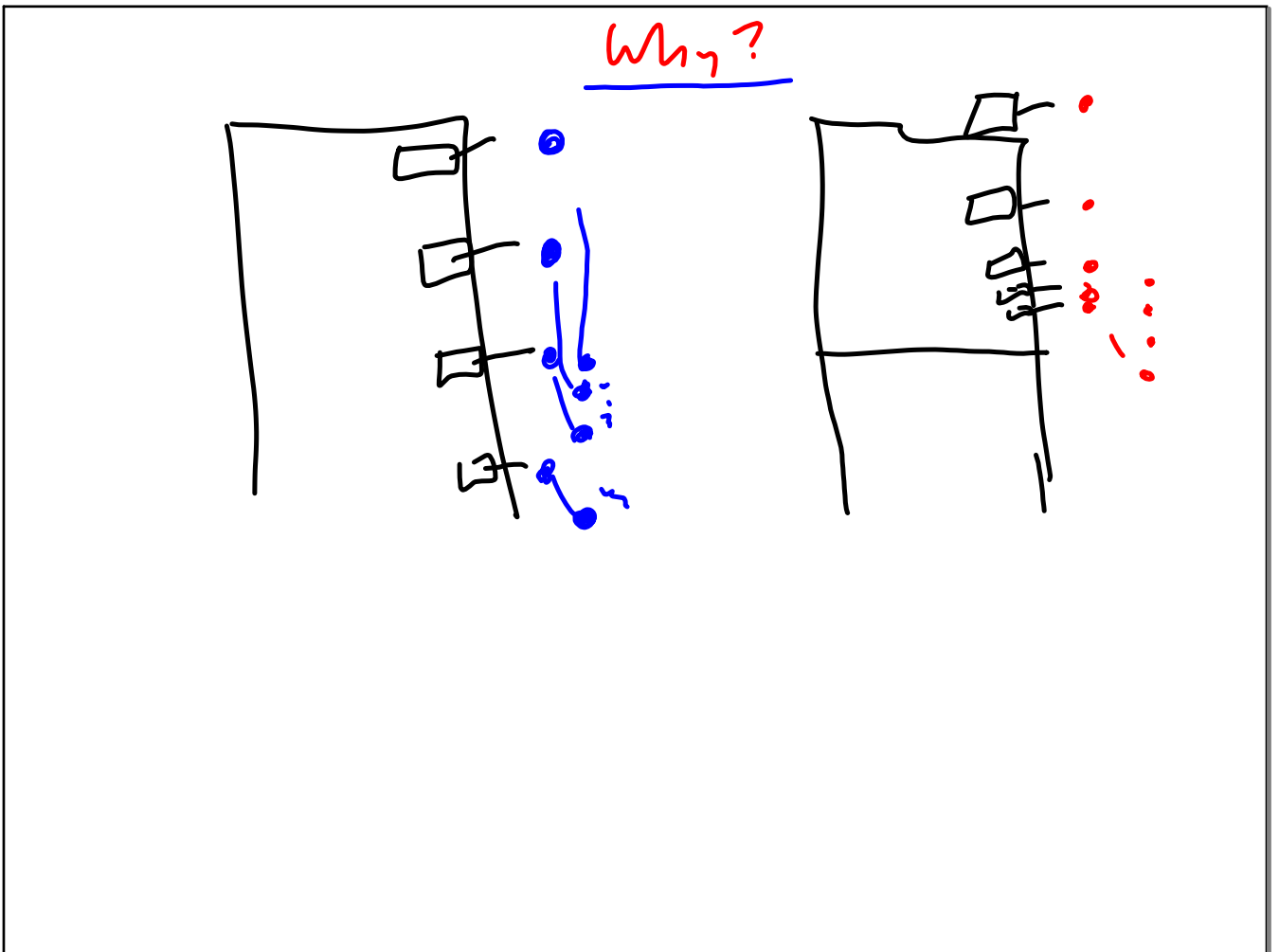
linear - first slow - fast

bottom TOP

non linear - second - linear

bottom TOP

1. hyp.
2. backward  $\rightarrow$  9.3 m/s<sup>2</sup>
3. 2 pcs. of data, hyp. correct?  
explanation
4. errors.



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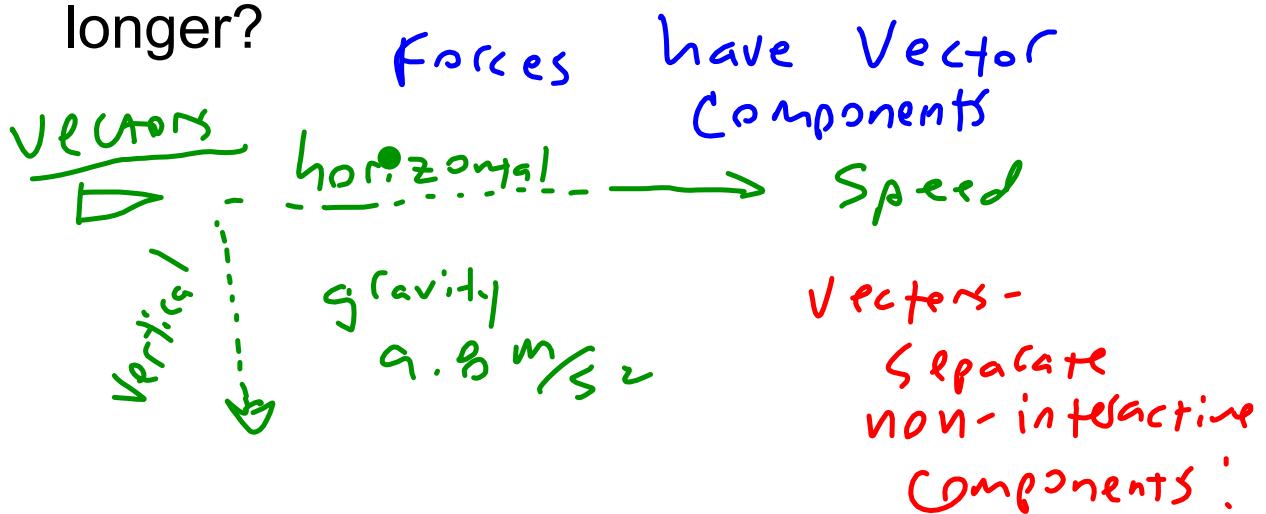
There is no air resistance, and a bomb is dropped from a hot air balloon. The bomb takes 4 seconds to reach the ground. How fast is the bomb traveling when it hits the ground?

$$9.8 \text{ m/s}^2 \times 4 = 39.2 \text{ m/s}$$

$$\frac{\text{m}}{\cancel{\text{s} \cdot \cancel{\text{s}}}} \times \frac{\cancel{\text{s}}}{1} = \frac{\text{m}}{\text{s}}$$

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If you shoot a gun completely straight, and drop a bullet straight down from the same height, do they hit the ground at the same time? Or does the bullet being shot take longer?



Forces (4)

- Strong (nuclear)
- Electromagnetism
- Weak (radioactivity)
- Gravity

$$\text{Earth} \rightarrow 9.8 \frac{\text{m}}{\text{s}^2}$$

$$\text{Moon} \rightarrow 9.8/6 = 1.6 \frac{\text{m}}{\text{s}^2}$$

$$\text{Earth} \quad 90 \text{ lbs} \times 4.45 = 400.5 \text{ N}$$

$$\text{Moon} \quad 400.5 \text{ N} / 6 = 66.75 \text{ N}$$