OYO's

M9   Leah Colton ♡

9.1   I am in motion relitive to the first security gaurd and ✱ I am not in motion relative to the others.

9.2 $\dfrac{30}{1} \times \dfrac{1}{60} = \dfrac{30}{60} = \boxed{0.5}$

$S = \dfrac{d}{t} = \dfrac{115}{0.5} = \boxed{230\text{ mph}}$

9.3 $s = \dfrac{d}{t} = \dfrac{5}{12} = \boxed{0.42}$

9.4   b

9.5   1,170 mph

9.6   4 mps²

9.7   2 mps²

9.8 $\dfrac{3}{1} \times \dfrac{1}{\cancel{\frac{30}{60}}} = \dfrac{3}{\cancel{}} = \boxed{0.05}$

$a = \dfrac{fV - IV}{t}$ $a = \dfrac{0.15 - 0}{0.05} = \dfrac{0.15}{0.05} = \boxed{3\text{ mpm}^2}$

9.9   19.36 ft tall

9.10   1. The person w/ the stopwatch and the person who is yelling most likely won't get the correct timing.

2. Thats literaly all I found so we're just gonna go with that.

Study guides

Leah ♡

1. a. a point against which position is measured.
   b. physical measurement. doesn't contain directional information
   c. physical measurement that does contain directional ~~measu~~ information.
   d. The time and rate of change of an objects velocity.
   e. The motion of an object when it is falling soley under the influence of gravity

2. it is not moving
3. The glass of water is moving relitive to many reference points.
4. • The child is in motion Relitive to the 2 girls.
   • The first girl
5. $S = \dfrac{10}{0.5} = \boxed{20mph}$
6. $S = \dfrac{6,000}{2,700} = \boxed{2.2 \text{ mps}}$

7. • scalar
   • vector
   • scalar
   • scalar
   • vector
   • ~~sa~~ scalar
8. 12 mph towards one another
9. 0
10. $\dfrac{12-0}{2} = \dfrac{12}{2} = 6 \text{ mps}^2$

11. $\dfrac{0-30}{0.2} = \dfrac{-30}{0.2} = \boxed{-150 \, mph^2}$

12. air resistance: second influance. All objects expiriance it.

13. air resistance is very small on heavy objects

14. They will hit at the same time

15. 82.4m

16. 184ft

17. ~~Opps~~ oppisite direction

NOTES
formulas

Speed → $S = \dfrac{\text{distance Traveled}}{\text{Time Traveled}}$

ex: $S = \dfrac{78 \text{ miles}}{1.2 \text{ hrs.}} = 65 \dfrac{\text{miles}}{\text{hour}}$

acceleration → $a = \dfrac{\text{final velocity} - \text{Initial V.}}{\text{time}}$

ex: $a = \dfrac{11.6 - 2.0}{0.30} = 32 \dfrac{\text{fee/second}}{\text{Second}}$

distance → $d = \frac{1}{2} \times (\text{acceleration}) \times (\text{time})^2$

ex: $\frac{1}{2} \cdot (9.8) \cdot 1.44^2$

$.5 \cdot (9.8) \cdot 2.0736$

VOCAB:

- reference point
- Vector quantity
- Scalar quantity
- acceleration
- free fall

fact:

When objects travel in the same direction, their relitive speed is the difference between their individual speeds.

VECTOR

Quantity:
- Physical measurment
- Contains DIRECTIONAL Informantion.

Scalar

Quantity
- Physical measurment
- Does NOT Contain directional info.