

CHAPTER 4: ROLLER COASTERS – THE UPS & DOWNS OF HOW THEY WORK

Topic: _____ (1)

I. Physics of RCs

- _____ RC = _____ w/ track, like train track (2)
- + track = series of _____ + _____ follow'g path (3)
- + cars - _____ around track (4)
- + cars = 2 _____ (5)
 - 1 set whl – roll _____ (6)
 - ≠ set whl – roll _____ (7)
 - whl below – keep _____ on (8)
- RC cars = no _____ or _____ (9)
- + chain – pulls cars ↑ _____, _____ & _____ hill (10)
- + _____ → chain – come off cars (11)
 - ↳ _____ – push _____ (12)
- + taller, steeper hill → _____ ride → _____ cars (13)
- Cars (14)
- + roll _____ → _____ ↑ (14)
- + reach bottom / 1st hill, e. _____ & _____ → next hill (15)
- + near top / 2nd hill → _____ (16)
- + _____ / 2nd hill & start ↓ ≠ side → grav. – push cars t/w _____ (17)
- _____ repeat each _____ (18)

$$+ \text{ track} = \text{series of } \underline{\hspace{2cm}} + \underline{\hspace{2cm}} \text{ follow'g path} \quad (3)$$
$$+ \text{ cars} - \text{_____ around track} \quad (4)$$
$$+ \text{ cars} = 2 \underline{\hspace{1.5cm}} \quad (5)$$

- 1 set whl – roll _____ (6)

- $\neq$ set whl – roll _____ (7)

- whl below – keep _____ on (8)

$$- \text{RC cars} = \text{no } \underline{\hspace{2cm}} \text{ or } \underline{\hspace{2cm}} \quad (9)$$

+ chain – pulls cars $\uparrow$ _____, _____ & _____ hill (10)

$$+ \text{ } \underline{\hspace{2cm}} \rightarrow \text{chain} - \text{come off cars} \quad (11)$$
$$\nabla \text{ — push } \text{ — } \quad (12)$$

+ taller, steeper hill $\rightarrow$ _____ ride $\rightarrow$ _____ cars (13)

- Cars

$$+ \text{ roll } \underline{\hspace{2cm}} \rightarrow \underline{\hspace{2cm}} \uparrow \quad (14)$$

+ reach bottom / 1st hill, e. _____ & _____ → next hill (15)

$$+ \text{ near top / 2}^{\text{nd}} \text{ hill} \rightarrow \underline{\hspace{2cm}} \quad (16)$$
$$+ \text{ } \underline{\hspace{2cm}} / 2^{\text{nd}} \text{ hill \& start } \downarrow \neq \text{ side } \rightarrow \text{ grav. - push cars t/w } \underline{\hspace{2cm}} \quad (17)$$
$$\rightarrow \text{repeat each} \quad (18)$$

II. How RCs work

1. Cars _____ $\uparrow$ 1st, highest hill (19)
2. Cars go $\downarrow$ _____ (20)
 - e. eng - pull cars $\uparrow \rightarrow$ next hill
3. Cars reach _____ $\rightarrow$ e. _____ $\rightarrow$ next hill (21)
 - RC cars _____ $\rightarrow$ hills _____ t/w end track (22)
4. Cars roll stop $\rightarrow$ _____ (23)

2. Cars go $\downarrow$ _____ (20)

- e. eng – pull cars $\uparrow \rightarrow$ next hill

3. Cars reach $\underline{\hspace{2cm}}$ $\rightarrow$ e. $\underline{\hspace{2cm}}$ $\rightarrow$ next hill (21)

$$- \text{RC cars} \quad \rightarrow \text{hills} \quad \text{t/w end track} \quad (22)$$

4. Cars roll stop $\rightarrow$ _____ (23)

III. Conclusion

- Tomorrow, when RCs work, forces $\rightarrow$ press on _____
 $\searrow$ keep in _____ (24)

⌋ keep in _____