Quizizz
Non-Zero Total Force Review

Name : _____

Class : _____

Date : _____

1. If a hot air balloon rider is moving up at constant velocity, the total force on the person is:

☐ a) up   ☐ b) down

☐ c) zero   ☐ d) depends how heavy the person is

2. If a hot air balloon rider is moving up faster and faster, the total force on the person is:

☐ a) up   ☐ b) down

☐ c) zero   ☐ d) depends how heavy the person is

3. If a hot air balloon rider is moving up but slowing down, the total force on the person is:

☐ a) up   ☐ b) down

☐ c) zero   ☐ d) depends how heavy the person is

4. If a hot air balloon rider is moving down and speeding up, the total force on the person is:

☐ a) up   ☐ b) down

☐ c) zero   ☐ d) depends how heavy the person is

5. If a hot air balloon rider is moving down and slowing to a stop, the total force on the person is:

☐ a) up   ☐ b) down

☐ c) zero   ☐ d) depends how heavy the person is

6. Suppose that a cart is accelerating at a rate of 6 m/s^2. If the **force is doubled**, then what is the new acceleration of the sled?

☐ a) 6 m/s^2 ☐ b) 3 m/s^2

☐ c) 2 m/s^2 ☐ d) 12 m/s^2

7. Suppose that a cart is accelerating at a rate of 6 m/s^2. If the **mass is doubled**, then what is the new acceleration of the sled?

☐ a) 6 m/s^2 ☐ b) 3 m/s^2

☐ c) 2 m/s^2 ☐ d) 12 m/s^2

8. A person is riding Power Tower at Valleyfair while it is moving up and slowing to a stop. What sensation of weight would this person feel?

☐ a) lighter than usual ☐ b) heavier than usual

☐ c) usual weight ☐ d) weightless

9. A person is riding Power Tower at Valleyfair while it is moving down and slowing to a stop. What sensation of weight would this person feel?

☐ a) lighter than usual ☐ b) heavier than usual

☐ c) usual weight ☐ d) weightless

10. A 1500 kg Ford Truck can go from rest to a speed of 30 m/s in 8.7 s. What total force must act upon the car in order to make this happen?

☐ a) 261 N ☐ b) 5160 N

☐ c) 14700 N ☐ d) 19860 N

11. A 10 kg drone accelerates upward at 2.0 m/s^2. What force (push) is exerted by the air on the drone? (hint: draw the vector addition diagram to help solve)

☐ a) 98 N ☐ b) 20 N

☐ c) 118 N ☐ d) 78

12. An 80 kg person is riding an elevator that is accelerating upward at a rate of 1.0 m/s^2. Calculate the force gravity on the person.

☐ a) 80 N ☐ b) 180 N

☐ c) 864 N ☐ d) 784 N

13. An 80 kg person is riding an elevator that is accelerating upward at a rate of 1.0 m/s^2. Calculate the total force, **ΣF**, on the person.

☐ a) 80 N ☐ b) 180 N

☐ c) 864 N ☐ d) 784 N

14. An 80 kg person is riding an elevator that is accelerating upward at a rate of 1.0 m/s^2. Calculate the normal force, F_N, on the person.

     a)   80 N   b)   180 N

     c)   864 N   d)   784 N

Answer Key

1. c
2. a
3. b
4. b
5. a
6. d
7. b
8. a
9. b
10. d
11. c
12. d
13. a
14. c