

Answers to Sample Quiz 4

1. $H = 2h$ where H is the initial height and h is the final height.
2. $\frac{4}{m} \sqrt{\pi r f (m + 2M)} = v$ where r is the radius of the ring, m is the mass of the ring, M is the mass of the person, and f is the frictional force.
3. $\frac{1}{\frac{\cos \theta_2 \sin \theta_1}{\sin \theta_2 \cos \theta_1} + 1} L = x$ where θ_1 is the angle of the cable to the horizontal at the end of the bridge nearest the com and θ_2 is the angle of the other cable to the horizontal. L is the length of the bridge.

Conceptual questions

- | | |
|------|-------|
| 1. a | 6. c |
| 2. d | 7. b |
| 3. e | 8. c |
| 4. a | 9. c |
| 5. c | 10. e |