What is Uniform Motion?

Worksheet

Uniform motion is straight-line movement at constant speed and direction, so distance is simply d = vt and acceleration is always zero.

Questions

1. A cyclist moves at a constant 6 m/s for 15 s. Distance covered?

A) 21 m
B) 90 m
C) 9 m
D) 2.5 m

2. In uniform motion, acceleration is

A) increasing
B) decreasing
C) zero
D) undefined

3. On a distance-time graph, uniform motion looks like

A) a curve
B) a straight line
C) a horizontal line at d=0
D) random points

4. Which best describes uniform motion?

A) Changing direction only
B) Constant velocity, straight line
C) Speeding up steadily
D) Random speed changes

5. A train moves at a constant 25 m/s for 40 s. How far does it travel?

6. A conveyor belt carries a box 12 m in 6 s at constant speed. Find the speed.

7. A drone hovers forward at 4 m/s uniformly. How long to cover 100 m?

8. Define: What is uniform motion?

9. Define: What is the acceleration in uniform motion?

10. Define: Distance-time graph shape for uniform motion?

Answer Key

1. B) 90 m - d = vt = 615 = 90 m.
2. C) zero - Velocity is constant, so acceleration is zero.
3. B) a straight line - Constant speed gives a straight line with constant slope.
4. B) Constant velocity, straight line - Uniform motion means constant velocity along a straight path.
5. d = vt d = 25 40 = 1000 m
6. v = d/t v = 12/6 = 2 m/s
7. t = d/v t = 100/4 = 25 s
8. Straight-line motion at constant velocity - equal distances in equal times.
9. Zero - velocity never changes.
10. A straight line; its slope equals the constant speed.