Name _____

Tour de Units

Key relationships

1 km = 1,000 m 1 hour = 60 minutes = 3,600 seconds 1 mile ≈ 1.609 km 1 m/s = 3.6 km/h

Part A: Converting Speeds

1. During the Tour de France, a cyclist maintains an average speed of 40 km/h. Convert this speed to meters per second.
2. A British cyclist measures her speed as 25 miles per hour. Convert this speed to kilometers per hour.
3. A downhill racer records a top speed of 22 m/s. Express this speed in km/h.

Part B: Converting Time and Distance

4. A race stage lasts for 3 hours and 45 minutes. Convert the total time to minutes, then to seconds.
5. A cyclist rides a 120-kilometer stage. Express this distance in meters.
6. A training route is 60 miles long. Convert the route length to kilometers.

Part C: Mixed Conversion and Calculation

7. A cyclist travels at 10 m/s for 25 minutes.
   a) Convert 25 minutes into seconds.
   b) Calculate the total distance covered in meters and in kilometers.
8. A sprinter rides at 36 km/h for 8,000 meters.
   a) Convert the speed to meters per second.
   b) Determine how many seconds the ride takes.
9. A cyclist completes a 150-kilometer stage in 5 hours.
   a) What is the cyclist's average speed in km/h?
   b) Convert that speed to m/s.

Part D: Challenge

10. A support vehicle travels 90 km in 1 hour 12 minutes. Convert its average speed to meters per second.