

Tuesday, January 6/15
Science 10

1. Return - Quiz: Chapter 9
 - Second Attempt - Friday at Noon

2. Chapter 11 - Displacement and Velocity
 - Physical Quantities
 - Direction
 - Position and Displacement
 - Velocity
 - Average Velocity
 - Acceleration

Quiz: Chapter 9

Part 1

- a) 7.09 kg #SD = 3
- b) 0.07601 m #SD = 4
- c) 1.2×10^5 #SD = 2

Part 2

1. a) Rule: Precision + or -
b) Rule: Certainty x or =
2. $67.0 \text{ km} \cdot 98 \text{ h} = \frac{67 \text{ km}}{1} \cdot \frac{98 \text{ h}}{1}$
 $69 | 2654 | 129$
b) $26.4 \text{ km} + 7.3 \text{ m} = 33.7 \text{ m}$

Part 3

- a) $\frac{J}{t} = \frac{F}{t}$
 $J = F \cdot t$
- b) $E_k = \frac{1}{2} m v^2$
 $\frac{E_k}{\frac{1}{2} m} = \frac{v^2}{1}$
 $\sqrt{\frac{E_k}{\frac{1}{2} m}} = \frac{v^2}{1} = v$
- c) $v_f^2 = v_i^2 + 2ad$
 $v_f^2 - v_i^2 = \frac{v_f^2 - v_i^2}{2d} = \frac{2ad}{2d} = a$

Part 4

1. SI system
2. a) $0.673 \text{ kg} \cdot \frac{1000 \text{ g}}{1 \text{ kg}} = 673 \text{ g}$
 $1 \text{ cm} = 10 \text{ mm}$

b) 46 mm to cm
 $46 \text{ mm} \times \frac{1 \text{ cm}}{10 \text{ mm}} = 4.6 \text{ cm}$

c) $36.78 \text{ g (all sig)}$ d) 14 h

36.78 g
↓
gram

Part 5

1. $\frac{v_{av}}{t} = \frac{d}{t}$
 $\frac{v_{av}}{t} = \frac{5.4 \text{ km}}{1.9 \text{ h}}$
 $v_{av} = 2.84 \text{ km/h}$
 $It \text{ is } 2.8 \text{ km/h}$

2. a) 75 km
b) 5.6 m/s
3. a) 0.076 h
b) 4 min

Part 6

Distance vs Time graph

1. $v_{av} = \frac{d}{t}$
 $v_{av} = \frac{5.4 \text{ km}}{1.9 \text{ h}}$
 $v_{av} = 2.84 \text{ km/h}$
 $It \text{ is } 2.8 \text{ km/h}$

2. Uniform motion
constant speed

3. 49 m

4. 6.92

5. $v_{av} = \text{slope} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{10 - 0}{4 - 0} = \frac{10}{4} = 2.5 \text{ m/s}$