**Longitude/Time Zones Practice**

1. Your time is 2:00 pm, Prime Meridian time is 10:00 am. What is your longitude? \( 60^\circ \text{E} \)
   
   \[ \text{10 am to 2 pm} = 4 \text{ hrs later} = \text{East} \]
   \[ 4 \text{ hrs} \times \frac{15^\circ}{\text{hr}} = 60^\circ \text{E} \]

2. Your time is 9:00 am, Prime Meridian time is 3:00 pm. What is your longitude? \( 90^\circ \text{W} \)
   
   \[ \text{9 am to 3 pm} = 6 \text{ hrs earlier} \]
   \[ 6 \text{ hrs} \times \frac{15^\circ}{\text{hr}} = 90^\circ \text{W} \]

3. Your time is 5:00 pm, Prime Meridian time is 4:00 pm. What is your longitude? \( 15^\circ \text{E} \)
   
   \[ \text{4 pm to 5 pm} = 1 \text{ hr} \times \frac{15^\circ}{\text{hr}} = 15^\circ \text{E} \]

4. Your time is 9:00 pm, Prime Meridian time is 2:00 pm. What is your longitude? \( 105^\circ \text{E} \)
   
   \[ \text{2 pm to 9 pm} = 7 \text{ hr} \times \frac{15^\circ}{\text{hr}} = 105^\circ \text{E} \]

5. It is 2:00 pm at the Prime Meridian and you are located at \( 30^\circ \text{W} \) longitude. What time is it where you are? \( 12 \text{ pm} \)
   
   \[ \frac{30^\circ \text{W}}{15^\circ/\text{hr}} = 2 \text{ hr west (earlier)} = 2 \text{ hours} \]
   \[ = 12 \text{ pm} \]

6. It is 2:00 pm at the Prime Meridian and you are located at \( 45^\circ \text{E} \) longitude. What time is it where you are? \( 5 \text{ pm} \)
   
   \[ \frac{45^\circ \text{E}}{15^\circ/\text{hr}} = 3 \text{ hr east (later)} \]
   \[ = 2 \text{ pm} + 3 \text{ hours} = 5 \text{ pm} \]

7. It is 10:00 am at the Prime Meridian and you are located at \( 60^\circ \text{W} \) longitude. What time is it where you are? \( 2 \text{ pm} \)
   
   \[ \frac{60^\circ \text{W}}{15^\circ/\text{hr}} = 4 \text{ hr W = earlier} \] \[ = 10 \text{ am} + 4 \text{ hours} = 2 \text{ pm} \]

8. It is 10:00 am at the Prime Meridian and you are located at \( 90^\circ \text{E} \) longitude. What time is it where you are? \( 4 \text{ pm} \)
   
   \[ \frac{90^\circ \text{E}}{15^\circ/\text{hr}} = 6 \text{ hr east = later} \] \[ = 10 \text{ am} + 6 \text{ hours} = 4 \text{pm} \]