

### Measurement Ranking Tasks

Name: Key

Score: \_\_\_\_\_

#### Conversions I

Below are given a measurement. Rank the measurements from greatest to least length.

A.  $2.97 \times 10^8 \mu\text{m}$

D.  $3.87 \times 10^{-4}$  miles

B.  $2.045\text{m} + 1.9\text{ft}$

E. 100 yards

C. 6983.2 in

F. 10.0m

Greatest 1 A 2 C 3 E 4 F 5 B 6 D Least

Explain your reasoning or show your work below.

Convert all lengths to same unit. I choose meters.

$$A. \#_m = 2.97 \times 10^8 \mu\text{m} \times \frac{1\text{m}}{10^6 \mu\text{m}} = 2.97 \times 10^2 \text{m} = \textcircled{297\text{m}}$$

$$B. \#_m = 1.9\text{ft} \times \frac{12\text{in}}{1\text{ft}} \times \frac{2.54\text{cm}}{1\text{in}} \times \frac{1\text{m}}{100\text{cm}} = .57912\text{m} \rightarrow 2 \text{ digits}$$

$$2.045 + .57912 = \textcircled{2.62\text{m}}$$

$$C. \#_m = 6983.2\text{in} \times \frac{2.54\text{cm}}{1\text{in}} \times \frac{1\text{m}}{100\text{cm}} = \textcircled{177.37\text{m}}$$

$$D. \#_m = 3.87 \times 10^{-4} \text{miles} \times \frac{5280\text{ft}}{1\text{mile}} \times \frac{12\text{in}}{1\text{ft}} \times \frac{2.54\text{cm}}{1\text{in}} \times \frac{1\text{m}}{100\text{cm}} = \textcircled{0.623\text{m}}$$

$$E. \#_m = 100\text{yds} \times \frac{3\text{ft}}{1\text{yd}} \times \frac{12\text{in}}{1\text{ft}} \times \frac{2.54\text{cm}}{1\text{in}} \times \frac{1\text{m}}{100\text{cm}} = \textcircled{91.44\text{m}}$$

Circle the response that best describes your confidence in your answer above.

$$F = 10.0\text{m}$$