Mth 85 Quiz 5 *Franz Helfenstein* **NAME**

Answers must be clearly **legible**, **simplified** and **boxed** or **circled**. Unless otherwise stated write answer as an **exact** integer or rational or use **two** decimal accuracy. **Units** required.

Compute and round according to the **class rounding rules** then circle the best answer

1a) 7.856 + 8.39 + 3.753 ≈

A) 19.999 B) 20 C) 20.0 D) 20.00 E) None of these

1b) 147.852 × 12 / 1.875 × 5.284 ≈

A) 4999.9999 B) 5000 C) 5000 D) 5000 E) None of these

2a) 52,368 + 10,611 + 10,000.0 ≈

A) 72,979 B) 72980 C) 73,000 D) 73,000 E) None of these

2b) 22455 × 1002 / 15000 ≈

A) 1499.994 B) 1500 C) 1500 D) 1.50×10^3 E) None of these

3) A rectangular lot is approximately 85' x 92'. Using those dimensions, Compute the area and round according to the rules we've used in class.

4) For the above problem, what accuracy (ft) is necessary in each dimension to expect the resulting area to be accurate to the nearest sq-ft?

85. __ __ __ __ ft × 92. __ __ __ __ ft

5) A circle has a radius approximately 17cm. Using those dimensions, Compute the area and round according to the rules we've used in class.

Substitute and Compute using b_1 = 5' 4 $\frac{3}{8}$", b_2 = 7' 9 $\frac{3}{4}$", h = 4' 8 $\frac{7}{8}$", D = 12.5, P = 13.0%

6a) $\frac{b_1 + b_2}{2} \cdot h =$

6b) $\frac{D}{\sqrt{1 + P^2}} =$

7a) 60 Mw = A) 6 thousand watts B) 60 thousand watts C) 600 thousand watts D) 6 million watts E) 60 million watts E) None of These

7b) 55 km = A) 550 m B) 5,500,000 m C) 5,500 m D) 55,000 m E) 0.055 m E) None of These

8) A 19' ft pipe is cut into 7 equal pieces. Assuming no loss due to the cuts, what is the size of each piece to the nearest 16^{th} inch. Give answer as __ft __ $\frac{\quad}{16}$ in

9) Convert to feet & inches rounded to the nearest whole 16^{th} inch:

8.587742 ft ≈ _____ ft _____ $\frac{\quad}{16}$ in

10) Write your answer in scientific notation rounded accordingly

(a) $\dfrac{1.2\times10^{5} + 2.3\times10^{5}}{(5.4\times10^{-2})(6.2\times10^{1})} \approx$

(b) $\sqrt{\dfrac{1.34\cdot10^{8} - 2.56\cdot10^{7}}{2\pi \times 10^{2}}} \approx$

BONUS

Using R = 1' 7", r = 9" and H = 2' 6" compute V to the nearest cu-ft. $V = \dfrac{\pi H}{3}(R^2 + Rr + r^2)$