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.

1a) 6×10^7 =
   A) 6 thousand
   B) 60 thousand
   C) 600 thousand
   D) 6 million
   E) 60 million
   E) None of These

1b) 5×10^{-6} =
   A) 5 thousandths
   B) 5 ten thousandths
   C) 5 millionths
   D) 5 ten millionths
   E) 50 ten thousandths
   E) None of These

2a)   62 milligrams =
   A) 6.2×10^2 gm
   B) 6.2×10^3 gm
   C) 6.2×10^{-2} gm
   D) 6.2×10^{-3} gm
   E) 6.2×10^{-6} gm
   E) None of These

2b)   7.8 kilometers =
   A) 7.8×10^3 m
   B) 7.8×10^6 m
   C) 7.8×10^9 m
   D) 7.8×10^{12} m
   E) 7.8×10^{-3} m
   E) None of These

3)   Simplify to 10^n (a) $10^5 \times 10^1 \times 10^{-3}$ =

(b) $\dfrac{10^8}{10^2 \times 10^5}$ =

In problem 4-5, give your answer in **scientific notation** $(x.xx \cdot 10^{\pm n})$ rounded according to our class rules:

4a) $\dfrac{3.24 \times 10^9 + 9.68 \times 10^8}{1.46 \times 10^3}$ =

4b) $\sqrt{5.24 \times 10^{-5} - 9.68 \times 10^{-6}}$ =

Substitute and Compute Using $x = -5.23 \cdot 10^5$, $y = 7.29 \cdot 10^5$, $z = 6.92 \cdot 10^{-4}$:

5a) $100(x + y)^{1.5}$ =

5b) $\dfrac{x - y}{z^2}$ =

In 6-9 write your result as ___ ft ____ /16 in

6)   32.9476 ft

7)   16.8472 ft

8) $\dfrac{12'\ 9\ \frac{2}{3}" + 13'\ 3\ \frac{7}{8}"}{5}$

9) $\dfrac{32'\ 9\ 3/16" - 5'\ 3\ \frac{7}{8}"}{7}$

10)   Find the area in sq-ft. $A = \dfrac{a + b}{2}\ h$. $a = 12'\ 5\ \frac{3}{8}"$, $b = 19'\ 2\ \frac{1}{8}"$, $h = 8'\ 6\ \frac{7}{8}"$.