Directions: Rewrite the following logarithms as exponents.

1) $\log _{4} 8=\frac{3}{2}$
2) $\log \frac{1}{1000}=-3$

## Directions: Rewrite the following exponents as logarithms.

3) $25^{\frac{3}{2}}=125$
4) $6^{3}=216$

## Directions: WITHOUT using a CALCULATOR, find the value of logarithm.

5) $\log _{3} \frac{1}{81}$
6) $\log _{2} 128$

Directions: Use a CALCULATOR to find the value of logarithm. Round to three decimal places.
7) $\log _{8} 6200$
8) $\log 438$

Directions: For the given data construct a plot using a LOGARITHMIC scale using the given bases. Be sure to label your axis and show your math..
9)

| Item | Weight in Milligrams |
| :--- | :--- |
| Pencil | 5 mg |
| Eraser | 45 mg |
| Calculator | 6000 mg |
| Backpack | $375,000 \mathrm{mg}$ |

Base 5


Base 10

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| Answers to 1.1 CA \#1 |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :---: | :---: |
| 1 $4^{\frac{3}{2}}=8$ | 2. $10^{-3}=\frac{1}{1000}$ | 3. $\log _{25} 125=\frac{3}{2}$ | 4. $\log _{6} 216=3$ | 5. -4 |  |  |
| 6. 7 | 7. 4.199 | 8. 2.641 | 9. SEE BELOW |  |  |  |



Base 10

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