$\qquad$
$\qquad$

1. In the table below, solve the equation and write the appropriate properties in the given blanks

| Equations | Steps |
| :---: | :---: |
| $12 x-4+3 x=47$ |  |
|  |  |
|  |  |

2. For the following statement, write an equation that represents the given situation: Landon is going to use a computer at an internet cafe. The cafe has an initial charge of $\$ 10$ to use a computer and an additional charge of $\$ 0.80$ for every minute of use. Write an equation for $C$, in terms of $t$, representing the total cost of using a computer for $t$ minutes at the internet cafe.
3. For the following statement, write an equation that represents the given situation (SHOW YOUR WORK): Emma is moving and must rent a truck. In addition to an initial fee, the rental company charges a fee of $\$ 2.50$ per mile driven. If Emma were to drive 2 miles, the total cost would be $\$ 25$. Write an equation for $C$, in terms of $d$, representing the total cost of renting the truck if Emma were to drive d miles.
4. 

|  | Natural | Whole | Integers | Rational | Irrational | Real | Imaginary | Complex |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $4 / 9$ |  |  |  |  |  |  |  |  |
| 12 |  |  |  |  |  |  |  |  |

For all of the following problems, you must show your work using the dimensional analysis methods from this unit to receive credit. If necessary, round your answers to 2 decimal places.

| 16 ounces $=1$ pound | 1 ton $=2000$ pounds | 1 school year $=180$ days |
| :---: | :---: | :---: |
| 1 mile $=5280$ feet | 660 feet $=1$ furlong | 1 inch $=2.54 \mathrm{~cm}$ |
| 1 year $=365$ days | 20 drops $=1 \mathrm{~mL}$ | 24 hours $=1$ day |
| 1 carat $=.2$ grams | 2.2 pounds $=1 \mathrm{~kg}$ | 52 days $=1$ dog year |

5. Silver costs $\$ 14.77$ per ounce. How many kilograms could you purchase for $\$ 85,300$ ?
6. The dreaded Mount Doom stands 4,500 feet tall. How tall is it in decimeters?
7. If you are travelling $85,000 \mathrm{ft} / \mathrm{sec}$, how fast are you going in miles/hour?

Solve each of the following for the indicated variable. You must show your work to receive credit.
8. $\frac{P}{4}-e=t$
$p=$ $\qquad$

## REVIEW from Units 1 and 2

10. 

Domain: $\qquad$ Range: $\qquad$
Increasing: $\qquad$ Decreasing: $\qquad$
$x$ - int in function notation: $\qquad$
y-int: $\qquad$ Rate of Change [-5, 5]:
$\qquad$

$$
\text { End Behavior: } \begin{aligned}
& x \rightarrow-\infty, f(x) \rightarrow \\
& x \rightarrow \infty, \quad f(x) \rightarrow
\end{aligned}
$$

$$
h=
$$

$\qquad$
9. $D=\frac{1}{2} e(9 k+h)$


Graph the following system by the method of your choice:
11. $x+2 y=-7$
$-7 x-8 y=1$


The following section is free response on the review but will be multiple choice on the test:
12. Each member of the Cross-Country Team has to eat .023 kg of pasta the night before the big race. If there are 15 members of the team, how many dg of pasta will they eat in total?
13. Looking at your answer for \#2, what are the term(s), coefficient(s), and constant(s) in your answer?
14. How many terms are in the expression: $\frac{9}{5} x^{7}+13 x^{5}-.07 x^{3}-22 x+38$ ?
15. How many mL are in 1 hL ?
16. Translate the following into an algebraic expression: 2 of a number more than the square of the quotient of 12 and that number.

