Instructions: Answer each question on loose leaf, quad-ruled (graph paper), headed properly and written in lead-graphite. Remember to fold paper along the center, work exercises in order top to bottom, left column then right column. Number multiple pages, and insert them in order of first to last. Show your work neatly, sequenced, appropriate and accurate.

Simplify the expressions; keep fractions as fractions, no mixed numbers or decimals.

1. $x-(9 x-10)+11$
2. $12 x+4\left(-2 x+\frac{1}{3}\right)$
3. $3(6 n-9)-5$
4. $7 n+8\left(n+\frac{3}{4}\right)$
5. $37 a+\frac{1}{2}-\left(a+\frac{1}{4}\right)$
6. $8(4 a-7)+5$
7. Use your algebra tiles to model the expression $4 x-3$, and explain whether or not the terms in this expression are like terms. Draw your tile model.
8. Gael and Ayub were arguing with Calil and Caleb over evaluating $-x^{2}$ where $x=3$. Gael and Ayub insist it's 9; Calil and Caleb countered vociferously that it is -9 .
Who's correct? Justify your response.
Solve for the unknown; keep your solution as a fraction, no mixed numbers or decimals anywhere in your solution!
9. $6 n=4 n+23$
10. $2 y+5=-y-4$
11. $-7 f+2 f=-36+f+3 f$
12. $x-(9 x-10)+11=7 x+8\left(x+\frac{3}{4}\right)$
13. $12 n+4\left(-2 n+\frac{1}{3}\right)=8(4 n-7)+5$
14. Identify and describe the error, if any, in the following solution:
$11-(3-x)=6(5-2 x)$
$11-3-x=30-12 x$
$8-x=30-12 x$
$8-x+12 x=30-12 x+12 x$
$8+11 x=30$
$8-8+11 x=30-8$
$11 x=22$
$\frac{11 x}{11}=\frac{22}{11}$
$x=2$
15. From \#14, if an error solve the equation correctly. If no error, state there was no error.
16. $\frac{\frac{1}{7}-x}{4}=\frac{2 x+9}{3}$; solve for $x$
17. $\frac{x-1}{5}=\frac{x+\frac{1}{3}}{8}$; solve for $x$.
18. Find two consecutive odd integers if twice the larger, increased by the smaller, equals 85 .
19. Find three consecutive even integers if their sum, decreased by the third consecutive even integer, equals - 22
20. Graph the equation $2 x-3 y=6$. Use for your x inputs $-2,-1,0,1,2$. Draw your axes precisely using a ruler; use the graph paper grid as your integers!
21. Graph the equation $\frac{1}{2} x+4 y=12$. Use for your $x$ inputs $-4,-2,0,2,4$. Draw your axes precisely using a ruler; use the graph paper grid as your integers!
22. Solve $2 x-3 y=6$ for $y$.
23. Solve $\frac{1}{2} x+4 y=12$ for $y$.
24. The weight, $M$ of an astronaut on the moon is directly proportional to the weight, $E$, on Earth. An astronaut weighing 84 kg on Earth weighs 14 kg . on the Moon.
a) Write the proportional linear equation for this situation; write the constant as a decimal, if appropriate.
b) Mr. Ford weighs currently 75.3 kg ; what is his weight on the Moon? State your result in a sentence, value rounded to the nearest 10th.

