**Math Plus Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Unit 1 Lesson 2 Homework**

**I. Evaluate the expression for the given value of the variable.**

1. $y^{4}÷8 when y=4$ 2. $3r^{2}-17 when r=-6$

3. $27-\frac{24}{b} when b=8$ 4. $\frac{9}{10}∙y-\frac{3}{10}when y=\frac{1}{2}$

**II. Decide whether the statement is true or false. If it is false, give a counterexample.**

5. $\left(-a\right)∙\left(-b\right)=\left(-b\right)∙(-a)$

6. The product $\left(-a\right)∙(-1)$ is always positive.

7. If $a>b$, then for any real number *c*, $a∙c>b∙c$.

**III. Evaluate the expression for the given value(s) of the variable(s).**

8. $\frac{15x^{2}+10}{y} when x=-3 and y=\frac{2}{3}$ 9. $\frac{3a-4b}{ab} when a=-\frac{1}{3} and b=\frac{1}{4}$

10. Find the area of a trapezoid whose height is 2m and whose bases are 6m and 10m. $A=\frac{1}{2}\left(b\_{1}+b\_{2}\right)h$

11. Find the volume of a cylinder whose height is 3cm and whose diameter is 10cm. $V=πr^{2}h$

**IV. Write the algebraic expression.**

12. Eleven decreased by the quantity of four plus a number.

13. Four increased by 11 times a number.

14. Four times the difference of x and 7.

15. Nine more than a number.

16. Three more than half of a number.

17. The quotient of a number and two tenths.

18. The ratio of two cubed and a number.

19. Five squared minus a number.

20. The product of four and a number.

21. The product of two and the sum of six and a number.