

1. Create a concept map for the different types of Real Numbers.

2. Write your own example of each Property.

Property	Addition	Multiplication
Commutative		
Associative		
Inverse		
Identity		

3. Evaluate the expression.

$$16^{\frac{3}{2}} + 20 \div 4 - 5^3$$

3. \_\_\_\_\_

4. Simplify:  $\frac{y^9 y^{-2}}{y^5}$

4. \_\_\_\_\_

5. Simplify:  $\left(\frac{x^3 y^8}{x^{-1}}\right)^3$

5. \_\_\_\_\_

6. Simplify:  $7^{-2}$

6. \_\_\_\_\_  
(no decimal!)

7. Simplify:  $(x^{-2} y^{-1})^{-1} (x^{-5} y^0)^2$

7. \_\_\_\_\_

8. Simplify:  $125^{\frac{4}{3}}$

8. \_\_\_\_\_

9. Does the following table represent a linear equation? (Be sure to show why.)

X	- 1	1	3	5
Y	5	6	7	8

9. \_\_\_\_\_

10. Perpendicular lines have \_\_\_\_\_ slopes, but  
parallel lines have \_\_\_\_\_ slopes.

11. Find the slope of the line that goes through (-1, 6) and ( 0, -7).

12. Write the equation of the line that goes through (2, -5) and is parallel to  $y = - 4x + 10$

13. Write the equation of the line that goes through (2, -5) and is perpendicular to  $y = - 4x + 10$

14. Use your graphing calculator to write the linear regression for the following data  
(use 1980 for  $x = 0$ ):

**Mean Price of Apples per pound for 1980 to 2000**

1980	\$0.593	1991	\$0.843
1981	0.525	1992	0.899
1982	0.648	1993	0.802
1983	0.532	1994	0.804
1984	0.64	1995	0.793
1985	0.677	1996	0.894
1986	0.72	1997	0.914
1987	0.741	1998	0.962
1988	0.635	1999	0.852
1989	0.741	2000	0.96
1990	0.652		

15. Use the linear regression equation from #14 to predict the mean price of Apples in 2010.