Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Algebra ws 8.7

Evaluate. No decimals allowed. Show work!

1. 3($\frac{1}{2}$)4 2. 8($\frac{2}{3}$)-2 3. Y = 4x use the domain: $\left\{-2, -1, 0, 1, 2\right\}$

Graph each function.

4. y = $\frac{1}{4}$(2)x 5. Y = 3x

A. growth/decay? \_\_\_\_\_\_\_\_\_\_\_ A. growth/decay? \_\_\_\_\_\_\_\_\_\_\_

B. asymptote \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ B. asymptote \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

C. domain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ C. domain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

D. range \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ D. range \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



6. y = -2(2)x 7. Y = -3($\frac{1}{2})$x

A. growth/decay? \_\_\_\_\_\_\_\_\_\_\_ A. growth/decay? \_\_\_\_\_\_\_\_\_\_\_

B. asymptote \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ B. asymptote \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

C. domain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ C. domain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

D. range \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ D. range \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. y = 2($\frac{1}{3}$)x 9. Y = 2x y = $\frac{1}{2}$x

A. growth/decay? \_\_\_\_\_\_\_\_\_\_\_

B. asymptote \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ intersection \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

C. domain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

D. range \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10. An investment of $2000 doubles every 8 years.

A. write an exponential function: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

B. graph this trend over the next 40 years

C. domain \_\_\_\_\_\_\_\_\_\_

 range \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11. A car depreciates in value each year. A brand new Explorer has a depreciation model of y = 40000(0.91)x

\_\_\_\_\_Which statement is FALSE?

1.  The car depreciates by 91% each year
2. The car depreciates by 9% each year
3. The decay factor is 0.91

Graph the values over 10 years.

Domain \_\_\_\_\_\_\_\_\_ Range \_\_\_\_\_\_\_